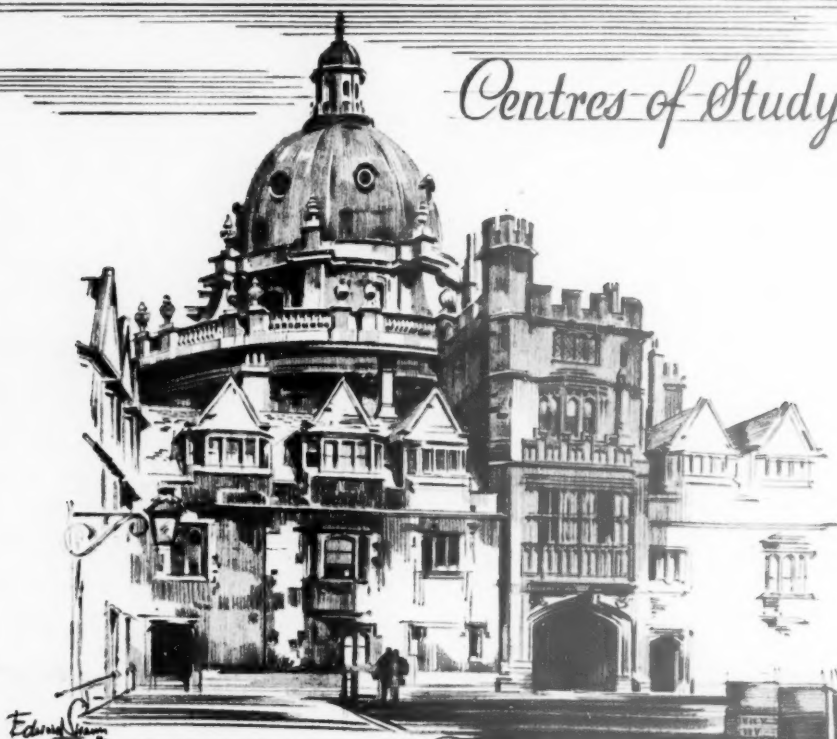


THE
ARCHITECT
& BUILDING NEWS

Building Exhibition Report

NOVEMBER 15, 1951 · VOL. 200 · NO. 4326 · ONE SHILLING WEEKLY

Centres of Study



Oxford—The Radcliffe Camera and Brasenose College Quadrangle, for hundreds of years the centre of academic study.



THE BRITON

DOOR CLOSER

*SPECIFIED by
leading
architects.*

WILLIAM NEWMAN & SONS Ltd
Hospital Street, BIRMINGHAM 19. Established over 200 years



... but one page

of nearly a hundred in our catalogue which illustrates and describes collapsible gates for every application from aircraft hangars to bar counters.

Your library is not complete without a copy—may we have your request?

LARGE SHUTTER GATES • FIREPROOF SHUTTER GATES
LIFT SHUTTER GATES • MULTI-LEAF DOORS • ARROWTUBE GATES
BAR COUNTER GATES • LATTICE GATES • STEEL DOORS

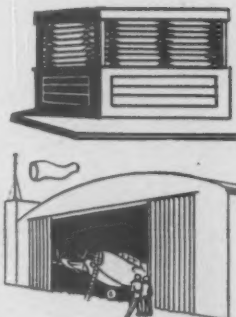
BOLTON
C-O-L-L-A-P-S-I-B-L-E GATES

BOLTON GATE CO LTD
BOLTON • LANCASHIRE

London Office: 248 Perth Road, Ilford, Essex

dm BG 55

See our Exhibits at the Building Exhibition, Olympia, on STAND NUMBERS 183 and 200, Rows H and J, respectively



The Advantages of

"PHARAOH" GYPSUM BROWNING PLASTER

Manufactured specifically to provide an economical labour-saving rendering or floating coat on high suction surfaces, such as **BRICK, STONE, CLAY TILES, PUMICE SLABS, etc.**

The modern method of plastering is to use Gypsum Plasters for undercoats rather than other materials which shrink when drying. The fact that Gypsum Plasters do not shrink is an important feature; their use eliminates the risk of shrinkage cracks in the finished work. It will be appreciated that it is an advantage that the base and finish coats should have the same chemical characteristics. By using Gypsum Plasters for both, the work is greatly speeded because succeeding coats can be applied on the same day.

MOISTURE. Gypsum Plaster combines chemically with a considerable proportion of the water used for gauging, so that where

Gypsum Plaster is used there is less moisture to dry out into the building.

POROSITY. A noticeable characteristic of Gypsum Plaster. In effect the plaster breathes so that when moisture condenses on the plastered surface it is absorbed and the damaging effects of condensation are obviated.

COST. Whilst initial costs may be slightly greater than where the cheapest materials are used, an increasing number of experts are, day by day, becoming convinced that the small extra cost per house is more than offset by the increase in speed of erection and the savings in maintenance charges.



OTHER GRADES OF "PHARAOH" GYPSUM PLASTERS

"PHARAOH" Special Haird Plaster. For rendering and floating on metal lathing, or on Gypsum plasterboards, wood lathing, concrete and other low suction surfaces.

"PHARAOH" Gypsum Wall Finish Plaster. For high grade setting coats where a superior finish is desired. Applied neat it provides a surface to which the most delicate decorations can be safely applied.

ALL "PHARAOH" PLASTERS ARE MANUFACTURED FROM GYPSUM ROCK AND ARE THUS HIGHLY RESISTANT TO FIRE

SERVICE. Research and testing laboratories are maintained for the assistance of Architects, Building and Plastering Contractors, on all matters relating to the use of the Company's products. This service includes the testing of sands intended for use with Gypsum Plasters, and we recommend, whenever possible, samples of sand should be submitted. Suitable specifications for all classes of plastering will be gladly submitted on request.

We shall be pleased to see you on **STAND 94 ROW E BUILDING TRADES EXHIBITION OLYMPIA**

THE BRITISH PLASTER BOARD LIMITED

SOUTHERN SALES OFFICE
MORRIS HOUSE
15 JERMYN STREET, LONDON, W.1
Telephone: Whitehall 9821



NORTHERN SALES OFFICE
BIRKENHEAD ROAD
WALLASEY, CHESHIRE
Telephone: Birkenhead 441

4

BRINGING COLOUR TO LIFE



IN THE PUBLIC SERVICE

It is no accident that "institutional" has become a byword for drab and gloomy colour schemes. There is, generally, little that is cheerful, colourful or inspiring about the impression given to the public by the buildings erected in its name, for its service — and at its expense.

And yet *need* public buildings be colourless? *Must* more ambitious decorative schemes be

expensive? Experience in the more progressive sections of the various public services shows that it need not and should not. There is much that paint is doing, under expert guidance, to help those who use these services. Docker Brothers, with unrivalled experience of official requirements and specifications, are doing a very great deal towards bringing colour into public life.

HERMATOR Super Gloss Paints, for example, are full-bodied free-flowing paints prepared from pigments of the highest quality. They are equally suitable for outdoor work and interior decoration.

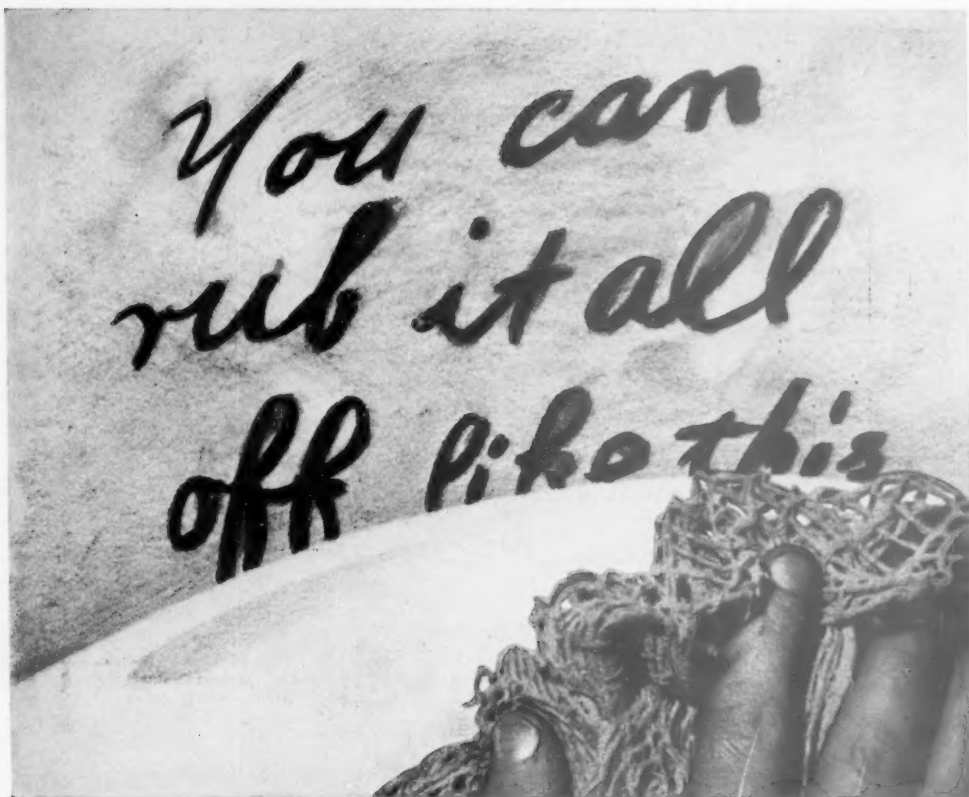
DOCKER BROTHERS

Makers of Paints, Lacquers and Varnishes for every purpose

LADYWOOD



BIRMINGHAM · 16



Blots and scribbles, fingerprints and dirt are wiped off with ease when the wall is faced with "VITROLITE." Water, soap, grease, smoke, soot and all acids (except hydrofluoric) cannot affect the hard, brilliant, fire-finished surface of "VITROLITE," the modern glass facing for interior and exterior walls, made in Black, White, Green, Green Agate, Primrose, Turquoise, Egg Shell.

"VITROLITE"

is $\frac{5}{16}$ " thick and is supplied in the

following ashlar sizes: 10" x 15", 12" x 18", 15" x 15", 14" x 21".

Consult the Technical Sales and Service Department at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, London, S.W.1. Telephone: St. Helens 4001; Whitehall 5672-6.



PILKINGTON BROTHERS LIMITED
ST. HELENS • LANCASHIRE

"VITROLITE" is the registered trade mark of Pilkington Brothers Limited. Available through the usual trade channels



G.F. Fittings are made in one grade only, suitable for Steam, Water, Gas, Oil or Air service, and their incomparable excellence is the result of nearly a hundred years of scientific research and practical experience.

They are beaded to give the maximum strength and to prevent stretching when used with taper-thread Tubes or fittings.

They are non-porous, are screwed in dead alignment and are of clean finish and smooth bore.

The entire absence of blowholes and sandholes is due to the scientific study given to the composition of the metal, the annealing, and the minute examination at the works, and absolute immunity from casting defects is ensured by an individual test of 360 lb. per sq. in. on each and every fitting sent out.

Insist on the G.F. brand mark.

DISTRIBUTORS

**LE BAS
TUBE**

COMPANY
LIMITED

River Plate House,
12 & 13 South Place,
London, E.C.2.

Warehouses :
London, Manchester,
Glasgow, Belfast.

Made at Britannia Works, Bedford



Reproduced from: THE BOOK OF ENGLISH TRADES & Library
of the Useful Arts, 1821

THE CARPENTER

As the carpenter works, the sweet smell of wood shavings fills the air. Smoothing the rippled grain of fresh - planed wood, he caresses Beauty herself. The burring saw, the hissing plane, the tapping hammer are music to his ears . . .

AND CRAFTSMANSHIP LIVES ON *With the coming of the Industrial Revolution and the development of machinery, the era of the lone craftsman passed into history. No longer was one man single master of his trade. Instead, the work was divided among specialists, each one a craftsman in his own particular line. To-day, the individual is an expert, whose specialised skill is an essential part of the whole.*

★
AT CELLON we believe in the essence of craftsmanship. For example, after a new decorative finish has been produced by our laboratory specialists, it is tested by experts who examine every Cellon product under the conditions of use for which it is intended. Like the carpenter of old, who by the skill of his craft released the pent-up genius of wood, we always strive for perfection in our finished work.

The existing range of Cerrux Decorative Paints includes Gloss, Satin and Matt Finishes, Flat under-

coatings, Primers for all types of surface and, also, Cerrusco Texture and Water Paints. The skill and forethought embraced in our work together with constant research have established perfect uniformity among our standard finishes. The result is that you can always be sure of consistency of quality when re-ordering a particular finish.

On the development side, we maintain a continuous service for the production of special finishes for special needs outside the standard range. It is, in fact, a service by craftsmen for craftsmen.

CERRUX

DECORATIVE PAINTS

Created
by Craftsmanship



CELLON
Aircraft
Finishes



CERRIC
Wood
Finishes



CERRUX
Marine
Paints



CERRUX
Coach
Paints



CERRIC
Industrial
Finishes

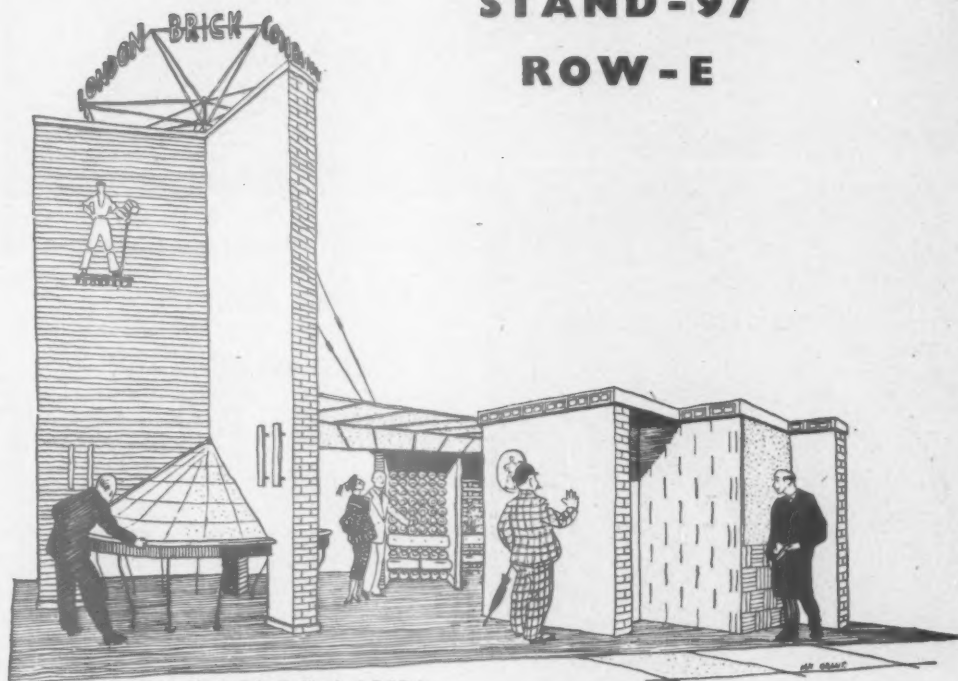
CELLON LIMITED • KINGSTON-ON-THAMES • PHONE KINGSTON 1234
CVR-679

BUILDING EXHIBITION OLYMPIA 1951



BY APPOINTMENT
BRICKMAKERS TO
H.M. THE KING

STAND-97 ROW-E



Architect: John R. Harris, A.R.I.B.A.

LONDON BRICK COMPANY LTD Head Office: AFRICA HOUSE, KINGSWAY, LONDON, W.C.2 Telephone: Holborn 8282. Midland District Office: Prudential Buildings, St. Philip's Place, Birmingham, 3. Telephone: Colmore 4141. South Western District Office: 11 Orchard Street, Bristol, 1 Telephone: Bristol 23004/5. Northern District Office: Gascoigne Street, Boar Lane, Leeds, 1. Telephone: Leeds 20771



This special weathering detail designed for the Margam Cold Strip Mill enabled panes of glass to be butted together without overlap in a neat and weatherproof joint. It enabled the Architect's "Cascade" effect to be successfully carried out.

WILLIAMS AND WILLIAMS at MARGAM

Further examples of the versatility of Aluminex Patent Glazing

The Abbey Works of the Steel Company of Wales, is the largest rolling mill in Europe and is one of the most outstanding engineering plants designed since the war. Working in conjunction with the Consulting Engineers, Messrs. W. S. Atkins & Partners, and the Architects, Sir Percy Thomas & Sons, Williams and Williams were able to produce glazing of a unique and impressive character, examples of which are shown in these pages. The cascade sidewall lights are of particular interest, being expressly designed to meet the exacting lighting requirements.

CASCADE GLAZING When it had been decided that Aluminex Patent Glazing provided all the features required for the sidewall glazing of the Steel Mills at Margam, certain technical difficulties were discovered. In order to produce even daylighting throughout the building it was necessary that the panels of sidewall glazing should curve inwards at the head. It was inadmissible to break the line of the curve by allowing the panes to overlap in a "lobster-back" fashion and curved glass was out of the question because of cost and difficulty of replacement. The effect had to be achieved by using flat panes of glass set out in a series of chords, and this arrangement presented special weathering problems, as also did the very flat pitch near the top of the cascade.

To overcome these the Aluminex engineers designed a new weathering detail which is shown in the drawing and in the photograph at the bottom of the opposite page, and is a development of the standard Aluminex "Z" weathering extrusion which is one of the special features of the Aluminex Glazing system. The remarkable effect achieved resembled cascades of glass and is vividly illustrated in the photographs. The cascades are each fourteen feet wide and range from fifteen feet to fifty-five feet high. The fifty-five foot cascades are composed of seven vertical tiers with a further curved portion of three tiers on a 9' 9" radius. The cascades were glazed in some instances with specially toughened glass in order to resist the thermal shock caused by hot ingots passing within a few feet of them.

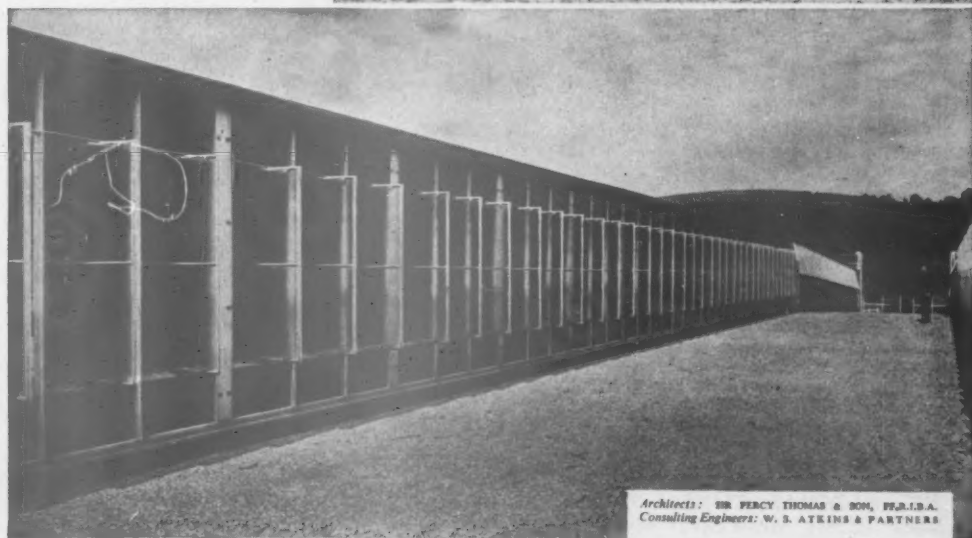
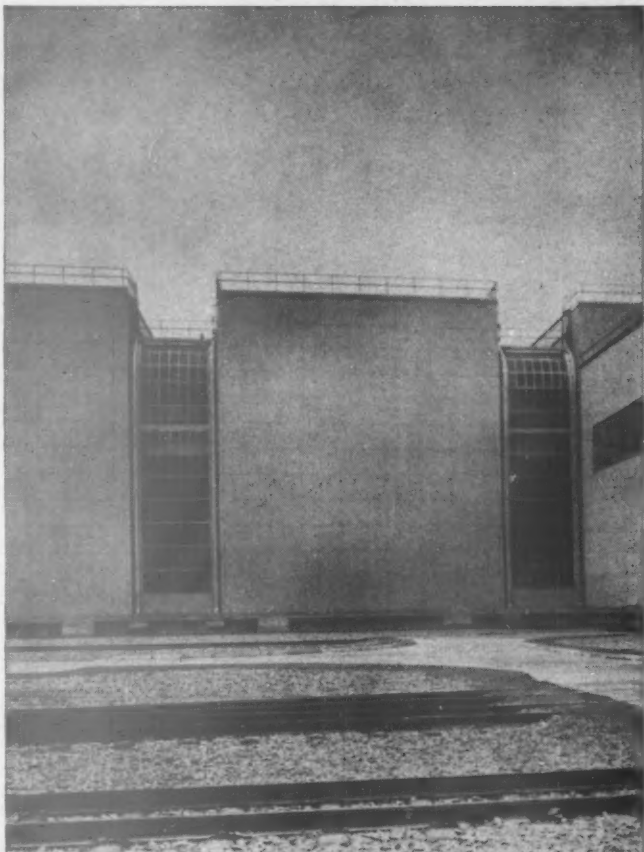
HIGH/LOW ROOF CONSTRUCTION

To provide controlled ventilation together with even distribution of light, the monitors in the Cold Mill Building are glazed partly with continuous top-hung Aluminex opening lights and partly with aluminium vertical pivot-hung windows made by the Reliance Division of Williams and Williams. Both are operated by Teleflex Gear with hand-operators placed so that they can be manipulated from walkways on the crane gantry. The vertical pivot-hung windows are arranged to open 135 degrees and are coupled together in ranges so that one gear operation opens the complete range. Thus ventilation can be controlled quickly to very fine degrees in accordance with either temperature or changes in wind direction.

Williams and Williams Ltd

Makers of Metal Windows, Doors and Aluminex Patent Glazing.

RELIANCE WORKS • CHESTER



Architects: SIR PERCY THOMAS & SON, F.R.I.B.A.
Consulting Engineers: W. S. ATEMS & PARTNERS

FROM EAST HAM



Flats for East Ham Borough Council. Interior walls, passages, stairways and corridors decorated with Cementone No. 7 Primer and Flat Finish.

TO

EAST AFRICA

In the Arctic Circle or the Tropics, in Europe or in Asia, in North America or South America—you will find a CEMENTONE Job.

The result obtained with Cementone decorative and protective products in these varying climatic conditions is your safety margin and provides proof whether it is internal or external work that



National Bank of India Ltd., Nairobi. Cementone No. 1 Colours used in floors, staircases and external renderings.

**YOU CAN
DEPEND ON**

Cementone
PRODUCTS

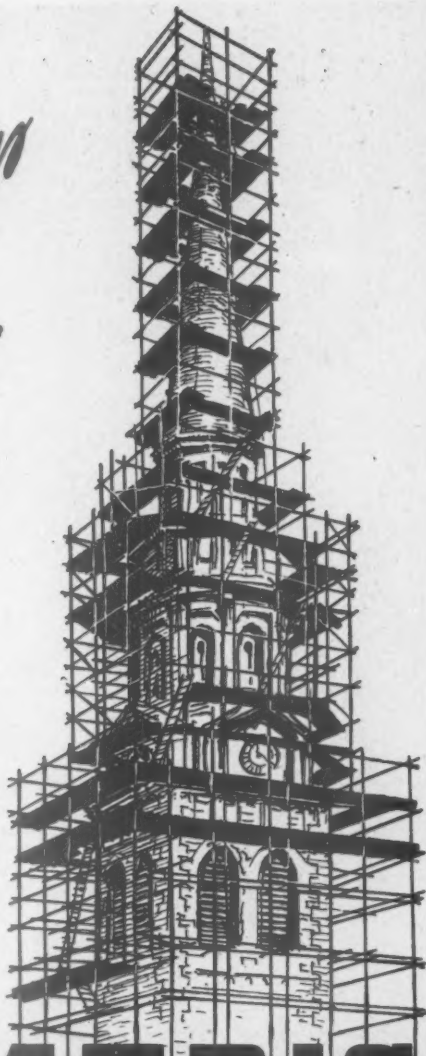
JOSEPH FREEMAN SONS & CO. LTD., CEMENTONE WORKS, LONDON, S.W.18
TELEPHONE: VANDYKE 2432 (5 LINES).

TELEGRAMS: CEMENTONE, WESPHONE, LONDON

*Whatever
the job-*

See us at the
BUILDING EXHIBITION
Stand H.172

Ample supplies of steel and alloy tubular
scaffolding, travelling cradles, heavy
suspended scaffolding, ladders, trestles,
and builders' plant available for hire.



PALMER'S

for CRADLES and

SCAFFOLDING

PALMER'S TRAVELLING CRADLE & SCAFFOLD CO., LTD.
129, Great Suffolk Street, London, S.E.1.

Telephone: HOF 2615-6



BEACON STEEL DOOR FRAMES



Installed at PIMLICO HOUSING SCHEME

Architects: Powell & Moya, A.A.R.I.B.A.

JOHN THOMPSON BEACON WINDOWS

LIMITED

Ettingshall, Wolverhampton & Imperial House, Kingsway, London, W.C.2

Telephone: BILSTON 41121

Telephone: TEMPLE BAR 3216

SEE OUR EXHIBIT AT THE BUILDING CENTRE, 9 CONDUIT STREET, LONDON, W.1.

The rural housing problem can be solved



THE WESSEX COTTAGE

"This tiled cottage has been developed to meet the need for sound and comfortable dwellings, particularly suitable for erection in rural areas. It can be put up speedily and with the minimum use of skilled labour, in either large or small groups, in any part of the country."

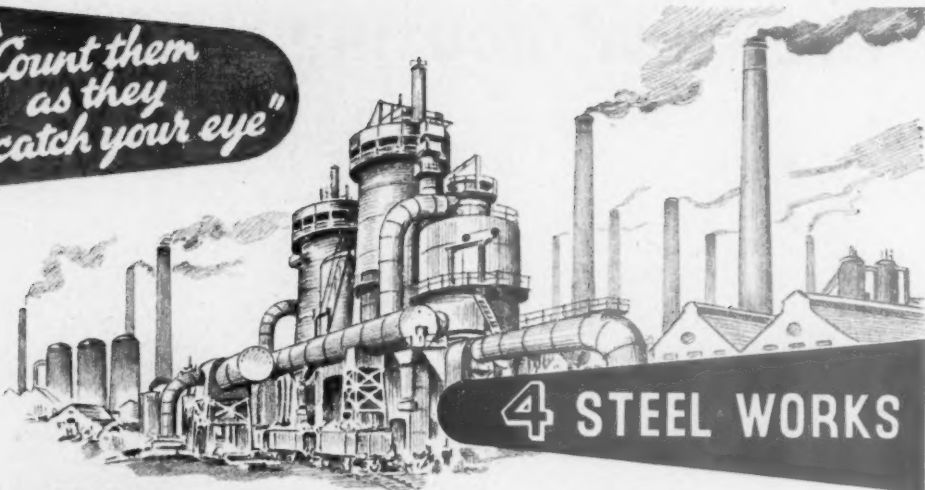
Visitors are welcomed to inspect the prototype of this cottage at the Orlit factory near Slough on the Colnbrook-by-pass.

ORLIT
CONSTRUCTION
PRE-CAST CONCRETE
PRE-STRESSED CONCRETE

A NATION WIDE SERVICE

ORLIT LTD. 18 Buckingham Gate,
London, S.W.1. Tel: Victoria 6701
ORLIT (Lancashire) LTD. 3 Brown Street,
Manchester 2. Tel: Blackfriars 0718
TARSLAG LTD. Economac House,
Wolverhampton. Tel: 23881
TARSLAG LTD. Toes Bridge,
Stockton-on-Tees. Tel: 6355
BEACON PRE-CAST LTD. Marsh Green
Road, Exeter. Tel: 4185/6
THE SCOTTISH ORLIT CO. LTD.
Sighthill Industrial Estate,
Edinburgh 11. Tel: Craiglockhart 2237
ORLIT (N. Ireland) LTD. Benson Street,
Lisburn, Co. Antrim. Tel: 3249

*"Count them
as they
catch your eye"*



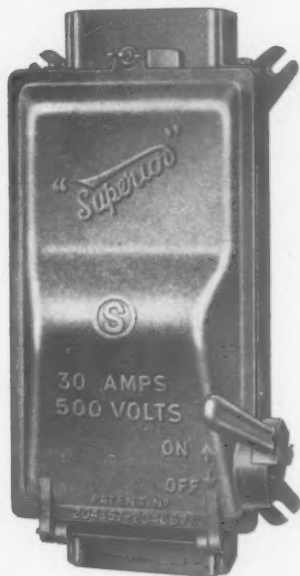
SANDERS "SUPERIOR"

Whether it is purely a psychological association of ideas, or not, the fact remains that one cannot reasonably relate the production of steel with anything of a flimsy character.

Perhaps that is why the encircled **S** and superscription which marks the Sanders Superior Switch is so frequently seen in steel works around the principal steel producing areas; perhaps on the other hand, it is because for roughly thirty years this particular switch has proved its mechanical and electrical capabilities wherever there is an arduous job of work to be done.

Count them as they catch your eye.

*Comprehensive stocks are
carried by selected wholesalers
in all large centres of population*



SANDERS
WEDNESBURY



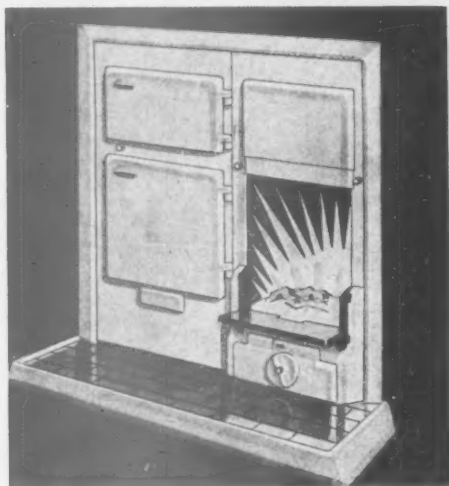
WM. SANDERS & CO. (WEDNESBURY) LTD., WEDNESBURY, STAFFS.

RADIATION INTRODUCE



THE No. 12 YORKIST COMBINATION GRATE[★]

★ Approved by the Ministry of Fuel & Power.



why it is top of its class

- Exceptionally cheerful open fire ensured by a lower fall bar and lower polished hob.
- Continuous burning on any domestic solid fuel when closed down.
- Well-known Yorkist low maintenance costs.
- Combines excellent cooking and heating performance with low fuel consumption.
- Simple 2-damper control gives the user complete command of oven heat and hot water output.
- The famous LEXOS labour-saving vitreous enamel finish goes well with almost any kitchen colour scheme.

see it for yourself!

Ask your Builder's Merchant to show you this fine Combination Grate or write to Radiation Group Sales Ltd., Leeds 12, for literature.

Specially developed for housing schemes.

SOLID FUEL **Radiation** COOKERS

★ AT THE COLSTON HALL BRISTOL ★

Harmony in Wood

by

**JOHN WRIGHT
& SONS
(VENEERS)
LTD**

THE new Colston Concert Hall, Bristol, is a fine example of modern British Architecture, combining the latest ideas in design and materials with perfect acoustics and a sense of restful comfort for audience and performer. Of tremendous importance are the specially selected and perfectly cut veneers supplied by John Wright & Sons, whose experience in producing fine quality veneers dates from 1866.

**VISIT OUR STAND No. 528
AT THE
BUILDING EXHIBITION**



View of main auditorium
walls and pilasters,
finished in John Wright's
sweet chestnut.

**JOHN WRIGHT
& SONS (VENEERS) LTD.**

Manufacturers of Veneers of all kinds since 1886

AVON WHARF · LONGFELLOW ROAD · MILE END ROAD · LONDON, E.3. TELEPHONE: ADVANCE 4444 (10 lines)

Progress Report...



Above: General view of site.

Right: A Classroom ceiling in TENTEST $\frac{1}{2}$ -in. Insulating board, fixed by our Specialised Construction Spring Clip Fixing, Type "M" (Aluminium Strip).



HATFIELD TECHNICAL COLLEGE

Architects: Messrs. Easton & Robertson
Contractors: Messrs. Gilbert-Ash Ltd.

We are providing the suspended ceilings to this new College, which is a most interesting example of modern building technique.

* TenTest $\frac{1}{2}$ -in. Insulating Board and † "Rabbit Warren" S.C. Acoustic Board, fixed by "TenTest" methods, are playing their part in providing the amenities which the College will offer to the student of the future.

* Now once more being imported from Canada, and available to YOU—so is Masonite Hardboard.

† A new and efficient acoustic material developed by the TenTest Co. Send for sample and details.

BUILDING EXHIBITION

Stand No. 130

Row F

OLYMPIA



TENTEST FIBRE BOARD CO. LTD., 75, CRESCENT WEST, HADLEY WOOD, BARNET, HERTS.

*Phone: BARNET 5861 (5 lines)

*Grams: Fibboard, Norphone, London.

London Office: 18, PALL MALL, LONDON, S.W.1. Phone: WHITEHALL 9366.

EXPANDED METAL PRODUCTS

at the

BUILDING EXHIBITION

Olympia, November 14th to 28th

STAND 95

ROW E



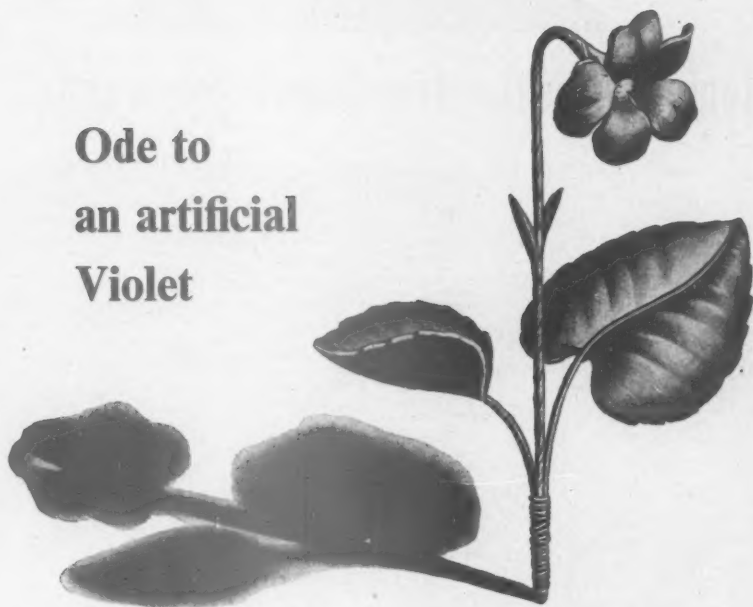
The Expanded Metal Company, Limited

Burwood House, Caxton Street, S.W.1. Whitehall 1736

STRANTON WORKS, WEST HARTLEPOOL. Hartlepool 2194

**ALSO AT: ABERDEEN, BELFAST, BIRMINGHAM, CAMBRIDGE, CARDIFF,
EXETER, GLASGOW, LEEDS, MANCHESTER**

Ode to an artificial Violet



Shelley, Wordsworth and Keats *might* have written odes to artificial flowers—but it hardly seems likely. Ingenious as they are, flowers of paper and silk have little to inspire the poet.

It's much the same with substitutes for wood. Wood is a natural *living* material with a character all its own. No two pieces of timber are ever exactly alike. Each is a thing of beauty in itself.

All very well, you may think—but what about the timber supply situation? Well, there are certain shortages still—but on the other hand there is a steady expansion in the supply of timber, and many hardwoods are being imported which can be obtained without licence. There may be one exactly fitted to the job you have in mind. Why not drop a line to the Timber Development Association and find out?

There's nothing like **WOOD**

Problems of water treatment you cannot ignore



Practical experience has proved that Threshold Treatment of water with Calgon is a simple, effective and economical way of dealing with such problems as:

Deposition of scale in calorifiers, heaters, hot water circuits and cooling systems.

Choking of jets in air-conditioning plant.

Corrosion of iron water mains.

A copy of a technical booklet describing Threshold Treatment will be sent on request.

can best be solved by threshold treatment

CALGON

for large installations.

WITH

MICROMET

for smaller hospitals, hotels, blocks of flats and small installations.

ALBRIGHT & WILSON LTD.

WATER TREATMENT DEPARTMENT, 49 PARK LANE, LONDON, W.1. TELEPHONE: GROSVENOR 1311. WORKS: OLDBURY & WIDNES

CARTER *hand printed* tiles

Both special and stock designs may be seen at the CARTER
Stand at the BUILDING EXHIBITION No. 85, Row D.

CARTER & CO. LTD. POOLE, DORSET.

Telephone: POOLE 125

CARTER & CO., LONDON, LTD., 29 ALBERT EMBANKMENT, S.E.11.

Telephone: RELIANCE 1471

COMMERCIAL MARBLE & TILES LTD., NEWCASTLE-ON-TYNE.

Telephone: JESMOND 900

Associated Companies: Art Pavements & Decorations Ltd.

The Marboldt Flooring Co. Ltd.

J. H. Barratt & Co. (1927) Ltd.

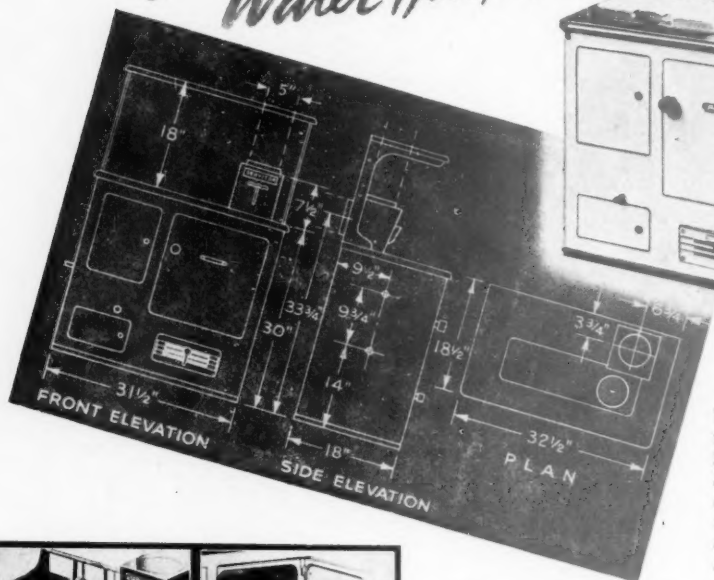


Architects: F. R. S. Yorke, F.R.I.B.A. E. Rosenberg, F.R.I.B.A.
C. S. Mardall, A.R.I.B.A.

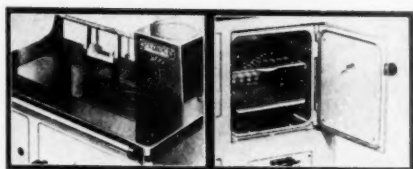
Special Tile Designs by Peggy Angus

The SERVITOR

Cooker and Water Heater

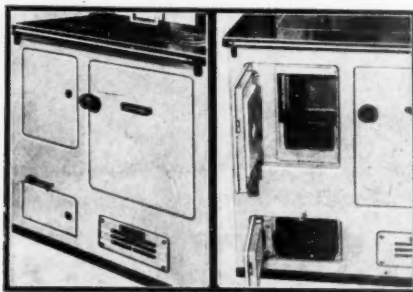


The "Servitor" fulfils the British Standard Specifications for Solid Fuel Cookers and is included in the List of Approved Appliances recommended to Local Authorities.



HOTPLATE

OVEN



CLOSED-UP VIEW

FIRE & ASHPIT

The "Servitor" is the very latest freestanding insulated Cooker, incorporating many novel features and designed for use on any type of solid fuel. It operates continuously and economically, at high efficiency, and provides a full cooking service, and in addition gives a constant supply of hot water for baths and washing up.

Machine-faced hotplate. Mercury Thermometer. Machined doors for air-tightness. Large Oven. Simple Controls. Adaptable Flue Outlet for vertical or horizontal connection. Streamlined appearance.

Full details on request



GRANGEMOUTH IRON CO. LTD., FALKIRK

Lifts and Escalators



by
J. & E. HALL LTD

LIFT & REFRIGERATING ENGINEERS
DARTFORD KENT

HIGHWORTH HOUSES



1. These houses, built for the Highworth Rural District Council, cost over £100 a house less than the equivalent traditionally built house.
2. They were built by a small country builder with the minimum of plant.
3. They took less time to build than traditional houses.
4. For each house the number of bricks used has been reduced from about 20,000 to 7,320; timber from 1.5 to 1.25 standards; the weight of materials from 189 tons (traditional house) to 127 tons; steel and cement have been saved.
5. These houses are not "pre-fabs."
6. Traditional construction and techniques have been used, where they are cheaper; non-traditional methods, where they have been found cheaper and more efficient.
7. This design is now available, complete in all details and including Bills of Quantities, Schedules of Materials and all information needed.
8. Other designs have already been prepared for houses of different sizes and requirements.

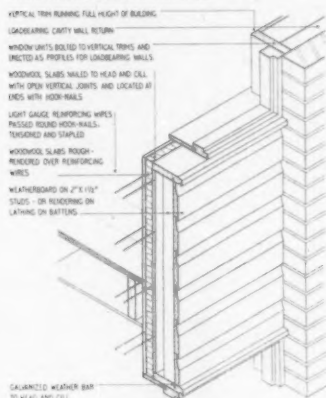
For further information concerning these houses, please apply to:

CAPITAL SELECTION CORP., LTD., DEVELOPMENT AND RESEARCH DEPT., HIGHWORTH, WILTS.

Highworth Processes

Certain new patented methods of construction have been used on the Highworth houses and are responsible for some of the savings effected.

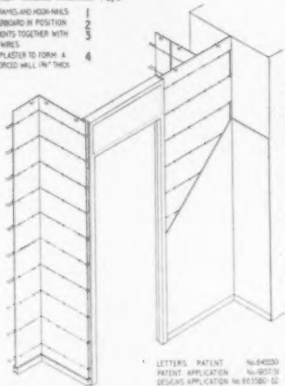
TYPICAL NON-BEARING WALL AT FIRST FLOOR



LETTERS PATENT NO. 645532
PATENT APPLICATION NO. 482759
DESIGNS APPLICATION NO. 955580-52

PARTITIONS: finished thickness 1 3/4"

1. TO PLASTERED WIRE-MESH
2. PLACE PLASTERBOARD IN POSITION
3. JOIN COMPONENTS TOGETHER WITH
REINFORCING WIRES
4. APPLY HARD PLASTER TO FORM A
SOLID REINFORCED WALL 1 1/2" THICK



1. External Non-Load-Bearing Walls

Self-supporting; lightweight; easy and quick to build; the saving in cost through using these walls is approximately £35 a house in the walls themselves, with an additional saving of at least £13 a house due to reductions in cost of foundations.

2. Partitions

Of similar construction to the external non-load bearing walls; the reinforcement in the partitions eliminates the cracking of the plaster; the cost of a partition 12ft long and 7ft 6in high (plastered and decorated both sides, with a door therein) is approximately £9 and the cost of a 2in block partition to B.S.492 of similar size and similarly finished is approximately £10, which shows a saving of approximately 2s per yard super.

3. Floor Joist Reinforcement

A twisted wire reinforcement to replace the normal timber herring-bone strutting.

Cost per foot run (measured over joists): 4 1/2d
Cost per foot run of herring-bone strutting (measured similarly): 1s 9d



For further information concerning these methods of construction, please apply to:
THE CAPITAL SELECTION CORPORATION, LIMITED
DEVELOPMENT AND RESEARCH
DEPARTMENT
HIGHWORTH WILTSHIRE



More water flows through Kontite Fittings than through any other type in the world. In design and manufacture they rank with the best in British Craftsmanship

KAY'S

Kontite
COMPRESSION *fittings*

SERVICE IN FITTINGS • FITTINGS IN SERVICE

LONDON OFFICE: 36 VICTORIA STREET, S.W.1. Phone: ABBEY 2144

KAY & CO. (Engineers) LTD., Bolton Brass Works, BOLTON.

PLAND PRODUCTS

Sink Units Stainless Steel

The photograph shows the interior of a kitchen with a "Pland" Stainless Steel Sink Unit (type L.S.17/4019) with plain drainers, complete with fixed arm pillar taps.

During the past five years, hundreds of council houses in Wales have been equipped with similar "Pland" Stainless Steel Sink Units—under the supervision of Mr. Colwyn Foulkes, M.Arch., F.R.I.B.A., Chartered Architect, of Colwyn Bay, for whose scheme at Llanwrst the Ministry of Health awarded the Bronze Medal for the best urban housing scheme in Wales—Period 1945-1949.



"Pland" Stainless Steel Sinks have a satin-smooth finish that can be made completely germ-proof by merely wiping over with soap and hot water. There is a wooden underframe to facilitate fixing and the special sound-deadening cuts out the washing-up clatter.

In association with The Taylor Rustless Fittings Co., Ltd., we can supply Architectural Fittings, Door Furniture, Butchers' Fittings, Holloware for Hospitals, Food and Chemical Factories; Chemical Plant—Tanks, Coils and Ducting.

THE STAINLESS STEEL SINK COMPANY LTD.

RING ROAD, LOWER WORTLEY, LEEDS 12, and at 14 GREAT PETER STREET, WESTMINSTER, S.W.1

TELEPHONE: LEEDS 38711

TELEPHONE: ABBEY 1575

3 ST. JAMES'S SQ. S.W.1



TRAFALGAR 7833

THE DEMOLITION & CONSTRUCTION

COMPANY LIMITED

CIVIL ENGINEERING, BUILDING
& PUBLIC WORKS CONTRACTORS



Flats with steel frame construction, St. Marylebone, London.
Architect : Louis de Soissons, Esq., A.R.A., F.R.I.B.A.



GAS and the Factory tea bar

Before an industrial catering and tea service can be brought into being, someone has to weigh up what special needs have to be catered for, what type of service and accommodation is to be provided, what should be the scope of the menu, and how a smooth flow of operations can be ensured. In addition to providing the source of energy for cooking, water heating and refrigeration, local Gas Undertakings are competent to advise on these and other problems which must be solved if catering is to be efficient. They do so willingly, when consulted, because they believe that is the best way to ensure, in the Nation's interest, that gas is used economically and wisely.

Helpful information on the many aspects of providing efficient services for cooking, hot water, space heating and refrigeration for all types of buildings may be obtained from local Gas Undertakings.

GAS

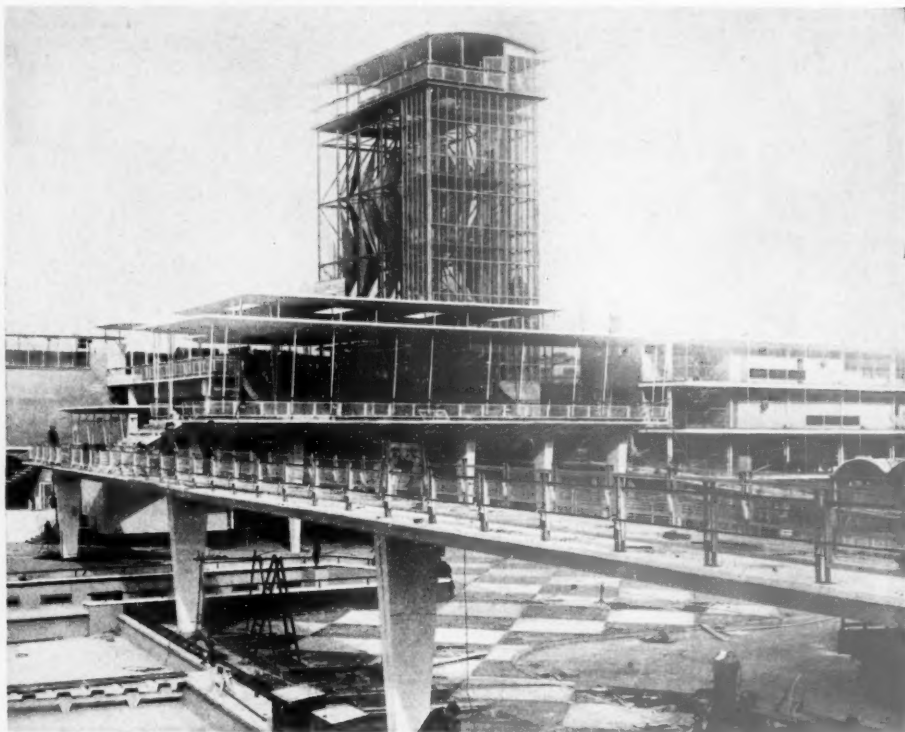
BUILDING EXHIBITION • STAND 299-300 • ROW P • NATIONAL HALL

ISSUED BY THE GAS COUNCIL, 1, GROSVENOR PLACE, LONDON, S.W.1 TELEPHONE: SLOANE 4554

GC10

KIRK & KIRK LTD

BUILDING & CIVIL ENGINEERING CONTRACTORS



Post-Tensioned Concrete Bridge. Waterloo Bridge Main Entrance and Viewing Tower.

Architects: Fry, Drew & Partners, FF.R.I.B.A.

Consulting Engineers: Freeman, Fox & Partners; R. T. James & Partners; Ove Arup & Partners.

Contractors to the Festival of Britain

Work comprises:

WATERLOO BRIDGE MAIN ENTRANCE
VIEWING TOWER ★ HARBOUR BAR
RIVERSIDE RESTAURANT
POST-TENSIONED CONCRETE FOOTBRIDGE
TO CONCERT HALL
SPORTS AND OPEN AIR EXHIBITION
NURSERY SCHOOL EXHIBITION, ETC., ETC.

ATLAS WORKS • PUTNEY • LONDON • S.W.15

Telephone: Putney 7244 (10 lines).

Telegrams: Fourkays Wespone London.

We like
going places
but . . .



■ ■ ■ Much as we wanted to be at the Olympia Exhibition this year, we're needed elsewhere. But then it's largely due to our reputation for extreme mobility and endurance that Brady Roller Shutters are so popular overseas—in Canada, Norway, India and Pakistan, West Indies, the African Continent, New Zealand—all over the civilised globe in fact.



G. BRADY & CO. LTD • ANCOATS • MANCHESTER 4 • Phone: COLlyhurst 2797/8

LONDON: New Islington Works, Park Royal, N.W.10. BIRMINGHAM: Rectory Park Road, Sheldon 26

CANADA: G. BRADY & CO. (CANADA) LTD., 1405, Bishop Street, MONTREAL 25.

Manufacturers of Brady Hand and Power Operated Lifts

S & B



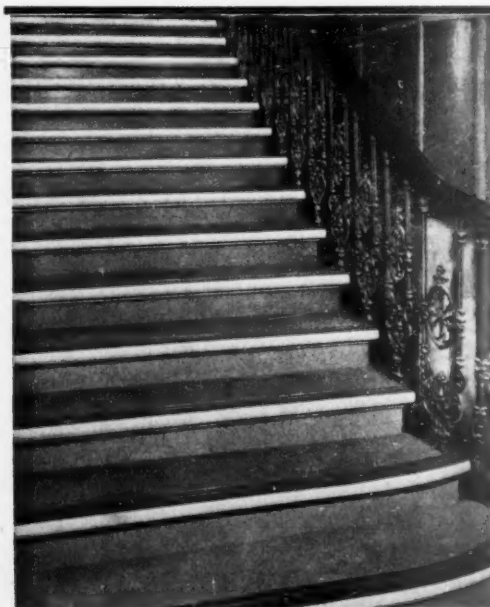
**Building
Trades
Exhibition**
Nov. 14—28
**STAND 193
ROW J**

FERODO Stairtreads combine three essentials: SAFETY, smart appearance and long life.

Gleaming aluminium nosing clearly outlines each step and the inlaid Ferodo fabric affords a firm reassuring non-slip grip, even to wet leather or rubber soles—two vital factors in SAFETY. Further, Ferodo Stairtreads absorb endless wear over a period of many years without deterioration in efficiency or appearance.

They feature largely in Architects' specifications and are being installed in both new and existing public buildings, including Stores, Offices, Cinemas, Theatres, Hotels, Blocks of Flats, etc.

A Striking Conversion... plus SAFETY



Ferodo Stairtreads are of two types—single and double channel. If preferred, in place of Ferodo fabric, the inlaid strips may be of Ferodo Composition—equally non-slip—in red, white or grey to harmonise with colour schemes. There is also a plain steel-backed Industrial type. All are described and illustrated in our Catalogue No. 732 of which a copy will gladly be sent on request.

The illustrations are of a recent conversion at Abbey House, Victoria, London, S.W.1. Architects: Boreham Son & Wallace, London, W.C.1. Contractors: Lewis Bros. (Kings Cross) Ltd., London, N.W.1.

FERODO

STAIRTREADS

FERODO LIMITED, CHAPEL-EN-LE-FRITH

A Member of the Turner & Newall Organisation

POST WAR REBUILDING AT PLYMOUTH



- | | |
|---|---------------------------------------|
| 1 Messrs E. Dingle & Co. Ltd.....Premises | 4 Co-operative Society's.....Premises |
| 2 Norwich Union Insurance Society's Offices | 5 George Street.....New Shops |
| 3 Pearl Assurance Co. Ltd.....Offices | 6 Ravenseft Properties.....Premises |
| 7 N.A.A.F.I. Premises | |

Portland Stonework to the above buildings
and others in Plymouth supplied and fixed

by

The BATH & PORTLAND STONE FIRMS Ltd.

LONDON

Telephone: VICToria 9182

BATH

Telephone: Bath 3248

PORTLAND

Telephone: Portland 3113

BUILDING EXHIBITION OLYMPIA STAND No. X371/2

IN CONJUNCTION WITH IMPREGNATED DIAMOND PRODUCTS LTD., GLOUCESTER.

Telephone: ENfield 4877/8

Telegrams: Quality, Enfield

SHUTTER CONTRACTORS LTD.

LINCOLN WORKS, ENFIELD, MIDDX., ENGLAND

Manufacturers of

Quality

ROLLING SHUTTERS IN STEEL, WOOD, & ALUMINIUM ALLOY

FOR ALL TYPES OF BUILDINGS

Approved Manufacturers to Fire Offices' Committee and London County Council Requirements



a world renowned process

**LIQUID STONE**

A durable solidifying stone process for direct application to Concrete, Cement, Stone, Brickwork, Asbestos sheeting and similar surfaces.

**PROTECTIVE
and
DECORATIVE**

For Exterior and Interior use.
Specified by Ministry of Works,
Air Ministry, Government
Depts. and Public bodies.

**THE
UNITED PAINT
COMPANY LIMITED**

MAKERS OF PAINTS, ENAMELS, VARNISH & DISTEMPERS

15, ST. HELENS PLACE, LONDON, E.C.3.

TELEPHONE: LONDON WALL 4426-7-8-9

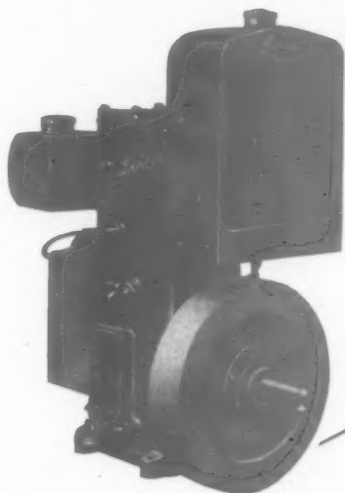
AND AT: LIVERPOOL, NEWCASTLE-ON-TYNE, CARDIFF.

• DEEP WELL PUMPS • SHALLOW WELL PUMPS •

DIESEL ENGINES 3 H.P. TO 40 H.P. • PETROL ENGINES 1½ H.P. TO 12 H.P.

DIESEL ENGINES 3 H.P. TO 40 H.P. • PETROL ENGINES 1½ H.P. TO 12 H.P.

THE MOST SOUGHT - AFTER ENGINE
IN THE WORLD



Because



Lasts Longest

and provides unfaltering reliability

Visit our stands at the Building Exhibition, Olympia, 170/171, Row H, and 212/213, Row J.

R. A. LISTER & CO. LTD., DURSLEY, GLOUCESTERSHIRE

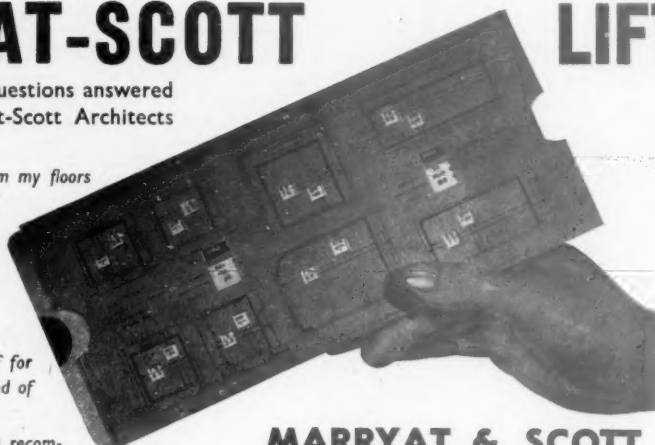
Branches: LONDON, STAMFORD, GLASGOW and DUBLIN.

• DEEP WELL PUMPS • SHALLOW WELL PUMPS •

MARRYAT-SCOTT LIFTS

Here are some of the questions answered for you by the Marryat-Scott Architects Lift Calculating Rule.

1. To what size should I trim my floors to permit the installations of a Passenger Lift to carry six persons?
2. What will be the load on the surrounding shaft walls?
3. How many people per hour could such a lift deal with, if for example, we agreed on a speed of 200 feet per minute?
4. What size Lift-Car do you recommend for carrying Beds and Stretchers in a Hospital?
5. Can I get a useful Lift for general goods in a shaft size of 6 feet x 6 feet and how large would the lift car be?



MARRYAT & SCOTT LTD

The Lift Manufacturers

Wellington Works, Hounslow, Middlesex

Now available free to Architects on request to any of these addresses:—

LONDON, 40 Hatton Garden	• BIRMINGHAM, 41 Water St.	• LIVERPOOL, 15 Tithebarn St.	• BRIGHTON, 34 Chesham Rd.
BRISTOL, 29 Orchard St.	• BRADFORD, 154 Harris St.	•	• EXETER, 22 Oakfield Rd.
GLASGOW, Moncur St.	• BELFAST, 6/7 Queen St.	•	• DUBLIN, 38 Dawson St.

The Quality Felts, Roofings & Dampcourses

THE QUALITY OF BLACKWELLS ROOFINGS SETS A STANDARD FOR ALL ROOFING PRODUCTS. OVER 50 YEARS' EXPERIENCE MAKES IT POSSIBLE TO OFFER MOST EXCEPTIONAL VALUES.

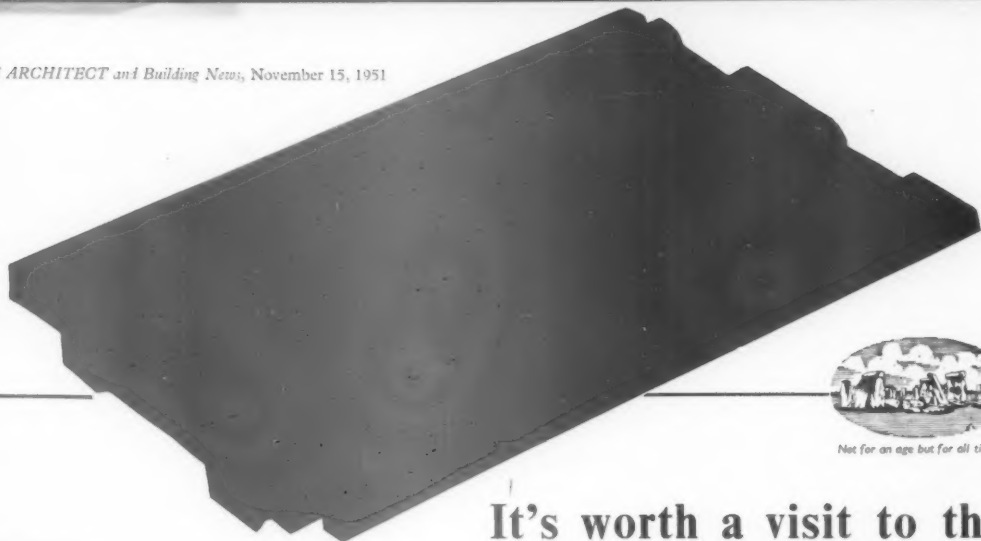
BLACKWELLS FELTS & DAMPCOURSES ARE MANUFACTURED IN ACCORDANCE WITH THE APPROPRIATE BRITISH STANDARD SPECIFICATIONS

★ WRITE FOR SAMPLES AND LITERATURE

BLACKWELLS & NATIONAL ROOFINGS LTD

ALTRINCHAM • CHES.
TEL. ALTRINCHAM 2641

ERITH • KENT
TEL. ERITH 2641



Not for an age but for all time

It's worth a visit to the
BUILDING EXHIBITION
to see the **MARLEY**
ROOFING TILES
and **MARLEY**
FLOOR TILES



Cock o' the walk



STAND 180-181 Row H

STAND 202-203 Row J

The Marley Tile Company Ltd., Sevenoaks, Kent. Sevenoaks 2251



Metal Windows

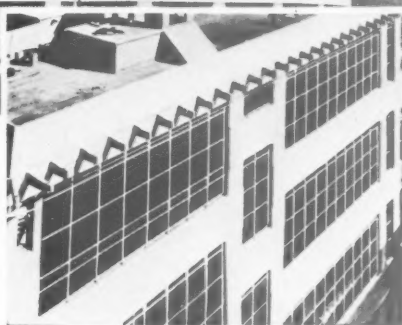


Block of Flats, Lowndes Street, London
Architect:
Sir John Burnet, Tait and Partners, F.F.R.I.B.A.

One of the wide range of

BRABY

P R O D U C T S



Sainsbury's Kitchens, Architect: Sir Owen Williams, K.B.E.

We are exhibiting at Building Trades Exhibition, Olympia, November 14—28, Stand No. 228, Row K.



Brochures on Request.

FREDERICK BRABY & COMPANY LTD

ECLIPSE WORKS, PETERSHILL ROAD, GLASGOW, N. TEL: SPRINGBURN 5151

OTHER FACTORIES AT: 352 EUSTON ROAD, LONDON N.W.1 TEL: EUSTON 3456 • IDA WORKS, DEPTFORD, LONDON S.E.8 TEL: TIDEWAY 1234 • HAVELOCK WORKS, AINTREE, LIVERPOOL 10 TEL: AINTREE 1721 • ASHTON GATE WORKS, BRISTOL 3 TEL: 64041 • ALSO: FALKIRK & MOTHERWELL

OTHER OFFICES: 110 CANNON STREET, LONDON E.C.4 (EXPORT) TEL: MANSION HOUSE 4034 • QUEEN'S BUILDINGS, 10 ROYAL AVENUE, BELFAST TEL: 26509 • PALACE STREET, PLYMOUTH TEL: 2261

“Tees Side”

We specialise in the manufacture and erection of steelwork for power stations and other industrial undertakings and, in addition, make steel railway wagons, steel barges and bridges.

The photograph shows a steel foundry fabricated and erected by us.

THE TEES SIDE BRIDGE & ENGINEERING WORKS LIMITED

WORKS & HEAD OFFICES: MIDDLESBROUGH

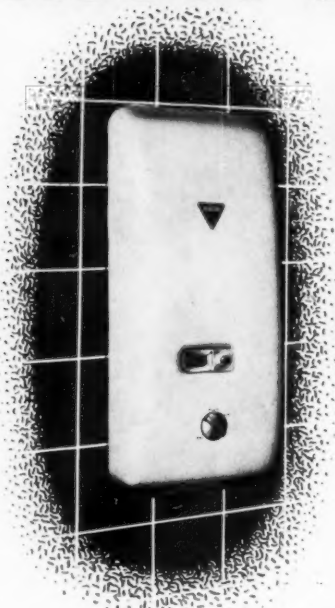
TELEPHONE: 2021-4

LONDON OFFICE: 17 VICTORIA STREET, S.W.1

TELEPHONE: ABBEY 1613



ASCOT PRODUCE FIRST BALANCED FLUE WATER HEATER



Particular advantages of the Ascot 715

1. Combustion chamber and flue sealed from the room. Vitiation of air in the room is absolutely impossible. No down-draughts.
2. Handsome but unobtrusive. Projects only 5 inches. No visible flue.
3. Can be fitted in a cupboard without regard to ventilation.
4. Ideal for multi-storied buildings. Can be installed on any outside wall even though the terminal may be in proximity to overhanging, or other projections.
5. Installation is simple. Full advantage can be taken of service ducts.
6. Smooth contours and hard enamel make cleaning easy. No crevices or dust traps. Particles cannot drop from the heater.

Supplies. As many municipalities have specified the 715 for their housing projects the needs of new buildings must have priority.

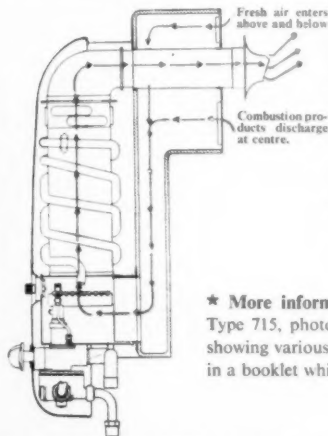


The new Ascot 715 multipoint is the first balanced flue gas water heater to go into production anywhere in the world. Once again Ascot leads the way! Once again Ascot helps the gas industry to maintain the position of gas as the best and most economical fuel for providing an instant, endless supply of hot water!

THE NEW ASCOT 715 is fundamentally different from any other water heater. The combustion chamber and flue are sealed off from the room in

which the heater is installed. Enclosed ducts draw air to burn the gas from outside the building and carry away all the products of combustion.

A FULL INSTANTANEOUS MULTIPOINT SERVICE similar to that of the popular Ascot 709 is given by the 715. It also has a stainless steel burner which has proved so successful in resisting corrosion and maintaining a high standard of efficiency.



The terminal can be fitted even in proximity to overhanging, or other projections. There is no flue pipe or cow.

*** More information.** A detailed explanation of the Type 715, photographs, a specification and drawings showing various methods of installation, are contained in a booklet which will be sent on request.

ASCOT GAS WATER HEATERS LTD., 43 Park Street, London, W.1. Grosvenor 4491

THE ARCHITECT & BUILDING NEWS

November 15, 1951

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid; U.S.A. and Canada \$9.00

Published by ILLIFFE & SONS LTD., DORSET HOUSE, STAMFORD STREET, LONDON, S.E.1
Telephone: WATERLOO 3333 (50 lines). Telegrams: "ARCHITONIA, SEDIST, LONDON."

Branch Offices: Coventry: 8-10 Corporation Street; Birmingham: King Edward House, New Street;
Manchester: 260 Deansgate, Tel.: Blackfriars 4412 (3 lines), Deansgate 3595 (2 lines); Glasgow: 26B Renfield Street

L.C.C. POINT BLOCKS

THE L.C.C. scheme to erect "sky-scraper" flats at Roehampton is being opposed by an organization representing local inhabitants on the grounds that flats rising 30 feet above the tree-tops will spoil the sky line.

Hampstead Borough Council is also trying to stop the L.C.C. from building flats this time on 12 acres of land near Hampstead Heath, on the grounds that the proposed scheme would destroy the rural character of the area. Is the London County Council, then, a juggernaut totally indifferent to the need to preserve such green belt as is still left to the citizens of London, embedded like maggots in the huge urban mass?

The answer, of course, is that the Council is quite alive to the importance of open space and the sacrosanctity of the perimeter of parkland, but they are also a body charged with the responsibility of housing the people they represent.

The dilemma is acute. It is also a symptom of our times in as much as the pressure of urgent problems results in the victimization of minorities who, through no fault of their own, get crushed by the "solutions" worked out in favour of the majority. Various trades like catering workers and transport workers know what conditions rush hours and public holidays can produce in the way of such pressure. The same dilemma exists in the housing field. People must be housed in better conditions. At the same time, the great Wen must be kept within bounds, and the town dweller must have access to some sort of country without long, expensive and exhausting travel.

It is certainly true that high blocks break the skyline and destroy any illusions of being far from the city. That is if you happen to be one of those



looking towards them. From the point of view of the occupants it is the converse; there is a fine view of parkland and the sense of spaciousness.

There seems for this generation no escape from the unpleasant duty of pushing the town further afield. The architects and planners of the L.C.C. are first-rate men, anything but anti-social in outlook, charged with the duty of housing a great many families. Their hand has been forced by circumstances.

Are there any other sites which could be acquired? Could land, equivalent in area to that to be built on, be turned into park elsewhere? Presumably not, although the general impression gained from moving about in London is that there are hundreds of acres of blitz and blight back land and redundant roads that could be replanned before virgin sites are urbanized.

"London architecture during the last eighty years has become famous through a series of blunders



A block of four terrace houses erected at Delapre, Northampton, to the winning designs in "The Builder" £1,000 House Competition. Architects: J. L. Womersley and G. Hopkinson, Borough Architect and Deputy Borough Architect respectively of the County Borough of Northampton. Builders: Messrs. T. Wilson and Son Ltd., Northampton. The cost of the intermediate house is £1,083. The increase of £133 over the estimated cost of £950, based on prices ruling in December, 1950, is accounted for by national increases in prices of materials and labour (£120), and improvements made during course of construction (£13). Further details will be given in a future issue of the "A. & B.N."

which no other city in Europe could have survived," wrote Mr. G. W. Stonier. Has the process ceased or not?

The scheme at Roehampton whereby a large park area remains round the "point blocks" is a most interesting one, and should certainly be tried. But must we always consume open space. Cannot we also create it?

£1,000 HOUSES

The thousand-pound house competition has been vindicated by the erection, at Northampton, of the design which won "The Builder" competition, for a price which, all things being equal, can be considered as that originally laid down. As built, the house, within its group or terrace of four, is plain-Jane but quite attractive, and if further examples can be brought to fruition, a number of detail criticisms could be met and the whole correspondingly improved. We understand that attempts are being made to build, in the same locality, about a hundred of this type of house. Such a project will show

better the relationships of site and road works to the thousand-pounder.

There are, however, two points which may need clarification if this type of house is to be built in any great number; the first is for the Ministry of Housing and Local Government. The Northampton house is 49 square feet below the standards required by the Ministry in the past; the main reductions are in the Dining-Living-Room (19 feet) and in the "Best" Bedroom (15 feet). The latter (at 120 feet) is the size put forward by the L.C.C. in their type flat-plans, but there is, as yet, nothing "official" which will enable Local Authorities to apply for permission to erect houses to such standards with any confidence that it would be granted.

The second point is for the R.I.B.A. and other architectural bodies; if this type of house is to be repeated in many places, what are the fees to be paid to the architects, (a) for planning the grouping and for the supervizing the erection of the houses? and (b) to the original designer, the winner of the competition? It would seem that to "scale fees" must be added some kind of agreed "scale royalties."

EVENTS AND COMMENTS

NEW PRINCIPAL FOR THE A.A. SCHOOL

Mr. Michael Patrick has been appointed principal of the Architectural Association School of Architecture. He has been on the staff of the A.A. since 1945 and has been carrying out the duties of acting Principal since the resignation of Robert Jordan. Mr. Patrick was selected from twenty-five applicants for the post. He was educated at Oundle, entered the A.A. School in 1931 and won the Howard Colls Travelling Studentship in 1932, the Second Year Second Prize in 1933, the Third Year Travelling Studentship in 1934 and the Decorative Marble Federation Travelling Studentship in 1936. After working for a time in Mr. Grey Wornum's office Mr. Patrick started his teaching career at the Cambridge University School of Architecture in 1937 at the same time doing private work. From Cambridge he went to Liverpool where he taught at the University School of Architecture and practised from 1938 to 1940. During the war he was architect in charge of M.O.S. and M.A.P. projects. Returning to London in 1945 he joined the A.A. school as a member of the teaching staff at the same time setting up once more in private practice.

Appointed to his new position a few days after his 38th birthday Mr. Patrick must be one of the youngest prin-

cipals ever appointed to the A.A. school. This is a fair omen in Festival Year. Those who know him will not worry about omens for they are already aware of his deep interest in architectural education and his devotion to the A.A. school.

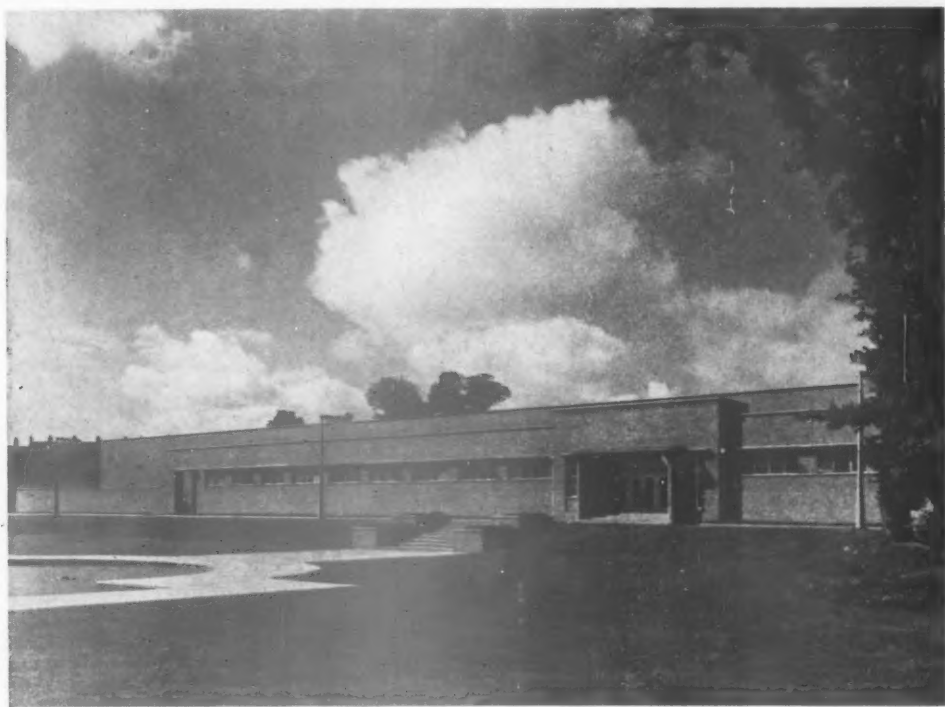
PRESIDENTIAL ADDRESS

Criticism of architects coming from the P.R.I.B.A., however well intentioned it is, is bound to make news for the public and to be misinterpreted. Even *The Times* in its quoted excerpts made the criticism seem much harsher than it really was. No one will deny the president his own opinions of the South Bank but I do not think that he should make them public on this of all occasions.

What I would like to hear in the president's inaugural address would be something about the R.I.B.A.'s programme for the coming year and a policy statement which would take some note of the various suggestions which are put forward by the technical press and others during the preceding year.

HELICOPTERS AGAIN

The Midlands are taking the helicopter business seriously. Manchester Corporation Airport Committee is considering a scheme for a circular building fourteen



Factory for The Needle Industries Ltd., Studley, Worcs. Architects: S. N. Cooke & Partners. This building has been awarded the R.I.B.A. Architecture Bronze Medal in the area of the Birmingham & Five Counties A.A. for the period 1946-1950. More details will be given in a future issue of the "A. & B.N."



I referred last week to the "Scandinavia at Table Exhibition" at the Tea Centre. My picture, which arrived too late to include with my note, shows a table set for a Norwegian dinner.

storeys high with what looks like an aircraft carrier flight deck on its roof. The estimated cost of the building, which according to the *Manchester Guardian* has been designed by a firm of civil engineers, is £1,500,000. I thought that the whole attraction of helicopters was that you could put them down anywhere without having to spend the earth on special landing places. The Manchester building is not expected to support itself on its helicopter landing fees and is planned to include a cinema for 2,000, a hotel with 250 bedrooms, a large car park, and five floors of offices. If they want to be quite sure that the project will pay they should put in a couple of pin-table saloons. The placing of helicopter landing places on the tops of high buildings may be a good idea but to cap a circular building with an overhanging rectangular table top which will, without doubt deprive several floors of offices of all of their modest allotment of Manchester sun seems to me to be unsound.

CAR PARKING IN LIVERPOOL

Long- and short-term car parking arrangements will shortly be considered by the Liverpool City Council. At

present about 3,500 vehicles are parked daily in Liverpool. Short-term arrangements by using minor streets, vacant sites and permanent parks will allow for nearly 4,400 vehicles, and the long-term plan, which proposes that in addition to minor streets and permanent street level parks, multi-storey parks on the American pattern should be constructed, will accommodate 6,000 vehicles. The cost of building multi-storey parks is estimated at about £150 per vehicle excluding the cost of land. Buildings to house 2,900 vehicles would be required on seven sites. Total building costs—getting on for half a million, but a better way of spending money than Manchester's Helicopterplatz plan.

Meanwhile, what of London's traffic and car parking problem. Is anything ever going to be done? If all the new cars on order were delivered tomorrow the traffic would stretch... ee! But it 'ud be a proper jam.

Mr. W. A. FORSYTH

I was very sorry to see the announcement of the death of Mr. W. A. Forsyth, F.R.I.B.A., at the age of 75. Elected an associate in 1895 Mr. Forsyth was one of the real old school of architects and at the age of 74 several times climbed the spire of Salisbury Cathedral during its examination and repair last year.

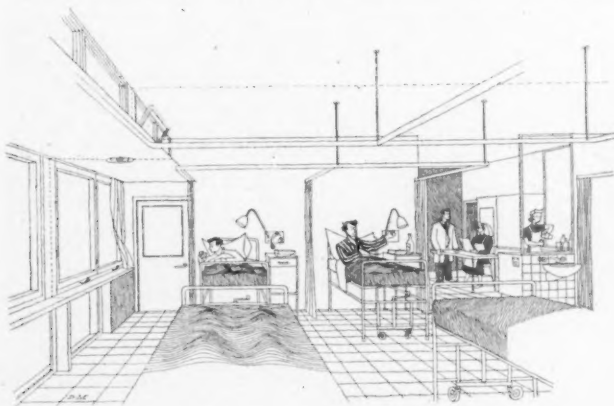
FESTIVAL STORY

I am told that things are still being delivered to the Festival authorities for the South Bank Exhibition. In one instance work held up on a display board, for lack of the board, had to be completed and delivered before the firm could be paid for the work done before the board was received. Sounds daft to me.

GUY FAWKES

It is customary to write to *The Times* if one hears a really early cuckoo or is accosted by an unnaturally early collector for fireworks. This year I can claim a record which is unlikely ever to be beaten. I was asked for a penny for the old guy on Paddington Station on November 6.

ABNER



EXPERIMENTAL HOSPITAL WARD.

Patients' eye view of the experimental ward block which is being erected at Greenock Hospital by the Investigation into the Functions and Design of Hospitals. The investigation was set up in 1949 by the Nuffield Provincial Hospitals Trust and is sponsored jointly by the Trust and Bristol University. Its object is to produce a report at the end of 1952 to help Authorities and Architects concerned with the provision of hospital services. The Architect and Director of the investigation is Richard Llewelyn Davies, M.A., A.R.I.B.A.

An article on the work of the investigation will appear in the "A. & B.N." on December 15. The Nuffield Trust is proposing to hold a Conference at Oxford for hospital architects from Dec. 14-16.

NEWS OF THE WEEK

New Principal of the A.A. School

The Council of the Architectural Association has appointed Mr. Michael Patrick, A.R.I.B.A., Principal of the A.A. School of Architecture.

Mr. Patrick was educated at Oundle School and received his architectural training at the A.A., where he was awarded a number of prizes. After leaving the School in 1936 he entered private practice and also held teaching appointments at Cambridge University and the Liverpool University School of Architecture. During the war he was an architect in charge of various projects for the Ministry of Supply and the Ministry of Aircraft Production.

Since 1945 he has been engaged in private practice and some of his industrial work was included in the Royal Institute of British Architects' Exhibition of Industrial Architecture. He was also concerned with teaching at the A.A. School, and in 1949 became Director of Technical Training there. Mr. Patrick has been Acting Principal since July, 1951.

The A.B.S. Competition

Already the Architects' Benevolent Society competition for a Monument to the Passing of the Good Old Days of Architecture is assured of a degree of success which can be described as moderate. The Committee hope that architects will not defer entering for it until too late so that, by the time sending-in day (December 3) arrives, the success can be described as overwhelming. In several cases an "office entry" is being submitted, the staffs of offices contributing ideas and draughtsmanship to a joint design or designs; the Committee commend this idea for general adoption and hope that every office in the country will produce at least one design. A copy of the conditions is obtainable from the Secretary of the Architects' Benevolent Society, 66, Portland Place, W.1, in exchange for a "non-returnable deposit" of ten shillings which goes to the Centenary Appeal Fund. Since the competition was announced, Mr. Rowland Emmett (of "railway" fame) has been added to the jury of Assessors. He was invited to serve but was away when the competition was promoted; on returning, he asked that he might be allowed to take part in so original and amusing an enterprise.



Photo: Wm. Blackledge, A.R.P.S.

The Parkinson Building, University of Leeds, which was opened by the Chancellor, H.R.H. The Princess Royal on November 9. Architect: T. A. Lodge, O.B.E., F.R.I.B.A.

Acoustics of the Royal Festival Hall

There is to be a meeting at the R.I.B.A. on November 23rd, at 4.30 p.m. to discuss the acoustics of the Royal Festival Hall in the light of the first few months' experience, and to see what lessons can be learnt for the future. The meeting is being convened by the Acoustics Group of the Physical Society, and architects are invited to be present. Mr. Parkin and Mr. Allen, of the Building Research Station, will introduce the discussion and Mr. Bagenal will speak. A number of musicians and music critics expect to contribute.

APPOINTMENT

Mr. John L. Berbers, Dip.Arch. (Dist.) L'pool., A.R.I.B.A., Dip.T.P.-M'chester., A.M.P.T.I., has been appointed a Chief Assistant Planning Officer under the Manchester Corporation. He was previously a Sectional Planning Officer under the Lancs County Council.

Mr. Berbers has also been awarded the Matthewman Travelling Scholarship, 1951, by the Liverpool Architectural Society.

RESIGNATION

Mr. Russell W. Kerr has resigned his position as Director of Town and Country Planning Association. For the present, communications should be addressed to the Secretary. No new appointment has as yet been made.

Croydon Borough Council has approved the design for a new Technical College for 4,424 students. The estimated cost is £1,400,000. The architect is Robert Atkinson, F.R.I.B.A.

COMING EVENTS

Chadwick Trust Bosson Lecture.

November 20, at 2.30 p.m. "The Health of Cities: some problems arising from congestion and overbuilding," by Professor William Holford, at The Royal Sanitary Institute, 90, Buckingham Palace Rd., S.W.1.

Royal Society of Arts.

November 21, at 2.30 p.m. "The Reclamation of Abandoned Industrial Areas," by Professor Dudley Stamp.

R.I.C.S.

November 21, at 6 p.m. "The Evolution of the R.I.B.A. Form of Contract," by Mr. H. A. Close, Legal Adviser to the N.F.B.T.E.

T. & C.P.A.

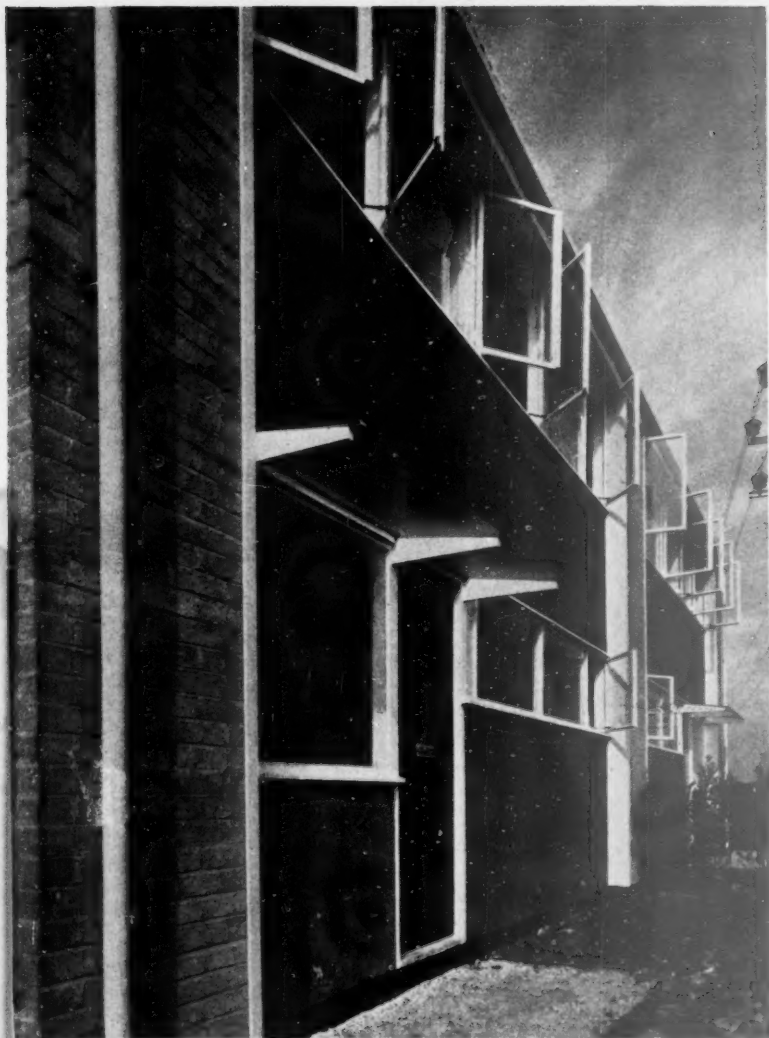
November 22, at 6.15 p.m. "The Obsolete Street," by R. Furneaux Jordan, F.R.I.B.A., A.A.Dipl., at 28, King's Street, Covent Garden.

Building Exhibition: See page 552.

Correspondence has been held over until next week.

CORRECTION

The engineers for the proposed new boiler house, Fulham Hospital, illustrated on page 307 of the *A. & B.N.* of September 20, are E. G. Phillips & Son and Norfolk of Nottingham, and the engineer supervising the work in progress, Mr. F. F. Draper.



Entrance elevation from south-east. The entrance canopy is obscured glass supported by timber bearers.

Low Cost Houses at Highworth WILTSHIRE

designer: ERIC CHICK

consulting architects:
POWELL & MOYA

quantity surveyors:
DAVIS, BELFIELD & EVEREST



IN building this pair of houses for the Highworth Rural District Council, the aim has been to construct cheaper houses than the normal traditionally built council houses without lowering the standards of space or comfort. The Council, who have given every encouragement to the experiment, have now decided to proceed with a block of terrace houses, designed on similar principles.

These houses can be built by builders with either large or small organizations and the economies effected do not depend on mass production. In this case, the houses were built by a typical, small, country builder and with the absolute minimum of plant.

When the weights of materials handled during the erection of a traditionally built council house are added up, the total reaches the figure of about 190 tons and, as most of the materials are handled at least three times before being finally placed in position, the men on the site may lift something like 600 tons. Here, the weight of materials has been reduced to about 125 tons—a reduction of about 1/3rd. This is reflected in the fact that the site man-hours show a considerable reduction over those taken on a normal job. It can further be stated that the man-hours on the shell of the house compare favourably with those for any type of non-traditional house referred to in "New Methods of House Construction"—2nd Report (H.M.S.O. 1949).

Cost

The design of the houses has allowed the use of light-weight materials where loads are not carried. This in itself is no innovation, but in the past light-weight materials used in non-traditional house construction have usually been more expensive and more complicated than the traditional heavy materials. Here, this is not the case. Both the cost of the materials and the cost of labour in these houses has been less and it is estimated that one of these houses is rather more than £100 cheaper than the normal equivalent traditional council house. Details of the costs are given in the Quantity Surveyors' report on page 549.

Type Plans

Other type plans and designs have been produced to show the flexibility of the constructional design. It should be stressed also that the technique and methods of construction could be applied to many forms of building—not necessarily only to standardized house designs. Some of the alternative type plans are illustrated

on pages 548. It should be noted that the size of the houses built already (886 sq ft floor area) is somewhat larger than what is now permissible in the recent recommendations of the Ministry of Local Government and Planning (Circular 38/51). They are also built in a semi-detached form. If similar houses—but slightly smaller, as now sanctioned—were built in terrace form as illustrated, there would be further economies.

PRINCIPLES OF CONSTRUCTION

Walls

Specialized pre-fabricated methods have not been used and the constructional methods allow the flexible use of alternative materials. The houses are built with traditional materials and by traditional methods where these are considered to be most efficient and economical—for example, end walls, party walls and cross walls are of traditional brick construction and carry all the loads. These walls are simple and almost unperforated and the full economies and advantages of traditional construction can thus be exploited.

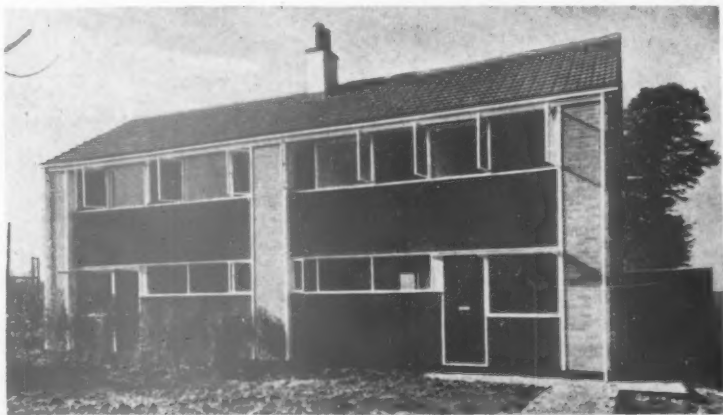
A new system of wall construction is used where traditional methods are uneconomical. These walls are, in fact, the external window walls and do not take any of the loads.

Foundations

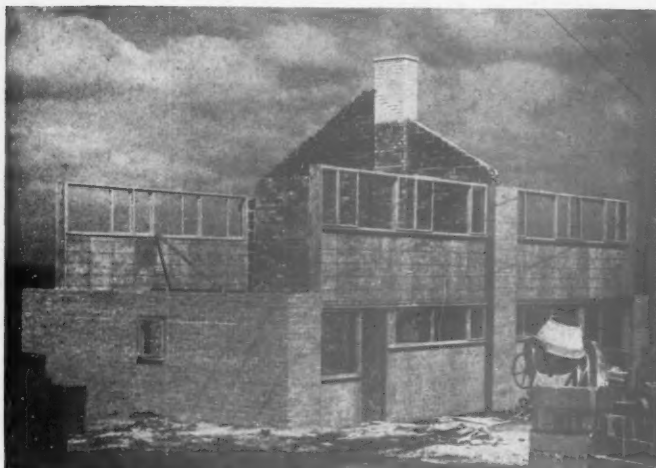
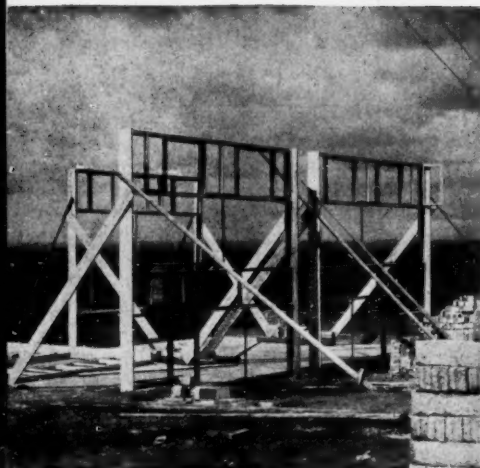
By restricting the loads to the cross walls only, considerable economies can be effected in the foundations. The worse the site, the greater are these economies, if compared with the foundations of a traditional house.

External non-load-bearing Walls

The construction of these walls (the apron walls to the ground and first floor windows) can be briefly described as a 3-ply wall formed in situ. The centre ply is formed of sheet materials—in this case cemented wood-wool slabs—to give high insulation values. These slabs are placed in position and are held with specially designed hook nails which are driven into the surrounding frame. Light-gauge reinforcing wire is then passed over the hook nails and across the face of the slab in a continuous length. When the reinforcing is in position, the hook nails are driven further in, to tension the reinforcing which is then stapled at convenient centres to the wood-wool slabs. The faces of the wood-wool slabs are then plastered in the usual way to form an extremely strong and rigid wall. In effect, the wall



East elevation. The rendered apron walls are finished in dark red spatter dash.



Left: Window units bolted to vertical trims to be used as jigs for the load-bearing walls. Right: Brick-bearing walls built against profile of continuous vertical trim. Wire-reinforced infilling panels in position.

becomes a reinforced concrete beam, which requires no shuttering. It is automatically reinforced against cracking.

Additional protection to these wall-beams can be given by applying an outer skin of rendering on expanded metal on battens, or weatherboarding on battens. The price of the house has been calculated on the assumption that this extra skin would be included. This additional skin, however, has not been incorporated in the houses already built as it is felt to be unnecessary. Its omission would, in fact, result in a further reduction on the prices given on page 549 of about £14 per house.

Method of Erection

The form of the non-load-bearing walls has been kept as simple as possible by concentrating windows and doors into one large frame with full length timber jambs and a head formed by the soffit and fascia with light-weight walls as infilling panels where windows or doors are not required. The frames are assembled on the floor slab by bolting the ground floor and first floor window units to the jambs. The complete assemblies, when erected, form jigs for the load-bearing walls and make the structure so precise as to allow carcassing timber, joinery, plumbing, etc., to be pre-cut to detailed drawings with complete confidence.

Drawings

This pre-planning has been taken to its practical limit by extracting all pre-cut and manufactured items and, under a unit number, giving all details for their individual fabrication. The drawings are, in fact, broken down into two parts which comprise the erection drawings and the manufacturing drawings.

The erection drawings are simplified by being produced in book form (on the lines suggested by the Anglo-American Productivity Team Report) with each page giving precise information on one phase only of the erection, e.g., foundations, window unit assembly, ground floor brickwork, etc. This method has proved

very effective in practice and is popular with the operatives.

The extraction of the various operations automatically leads to a remarkable degree of simplification in the structure as a whole, as the actual thinking is done in the drawing office rather than the individual problems being left to be solved on the site.

Partitions

The partitions are built up on similar principles to the non-load-bearing external walls described above.

In the case of the partitions, the centre-ply can be a sheet of plasterboard or insulation board. The sheet material selected, in this case $\frac{1}{2}$ in. plasterboard, is placed in position and held by the hook nails. The sheet material is then reinforced by wires, as already described, and plastered to complete the wall. Angles are formed by cutting one face of the plasterboard and

Continued on page 546

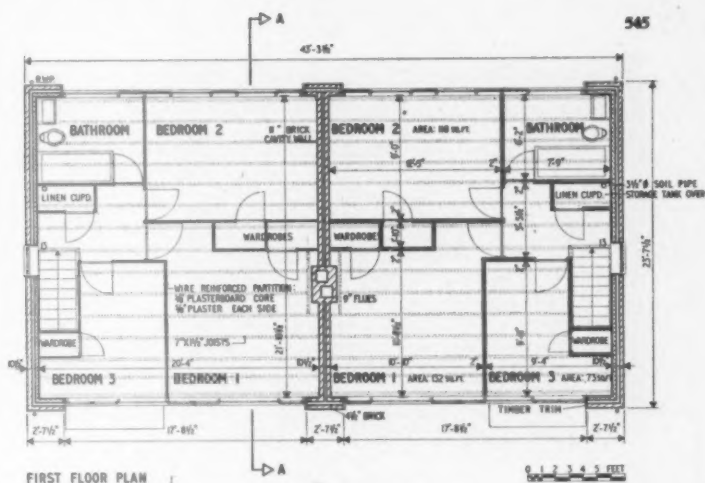
Kitchen



HIGHWORTH HOUSES

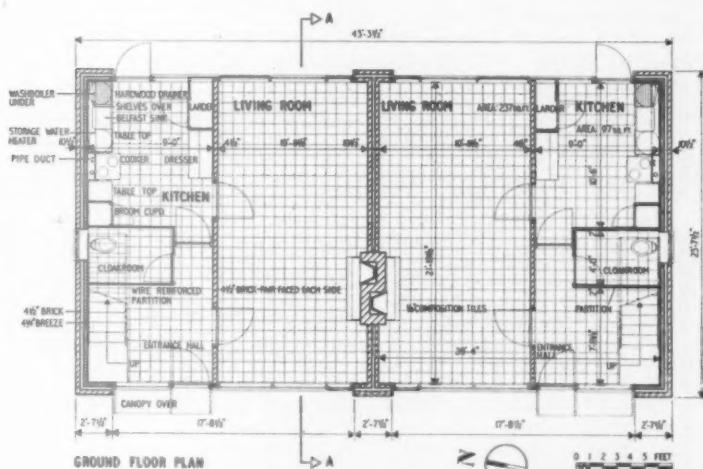
TYPE I

as built at
Highworth
Total floor area
each house : 886 sq. ft.



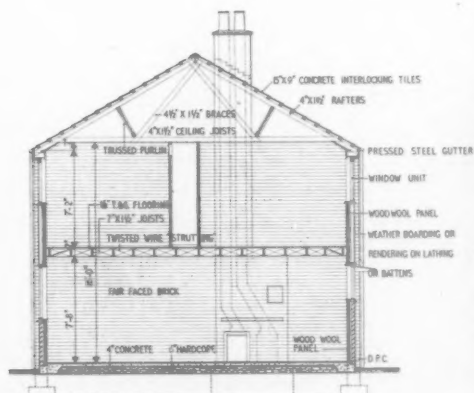
FIRST FLOOR PLAN

General Contractor : Percy Chick. Electrical Installation : Warne Bros. Floor Tiles : $\frac{1}{2}$ in The Marley Tile Co. Ltd. General Supplies : Stevenson & Co. Glazing : H. Hunter & Co. Ironmongery : Yannedis & Co. Ltd. Joinery : Samuel Elliott & Sons (Reading) Ltd. Plastering : G. Brooks Ltd. Plumbing : A. B. Haddow Ltd. Rainwater Goods—Pressed Metal : C. H. Coates Ltd. Roofing Tiles—Marley Ludlow Slate Grey : The Marley Tile Co. Ltd. Wood Wool Slabs—Marlith $2\frac{1}{2}$ in : The Marley Tile Co. Ltd.



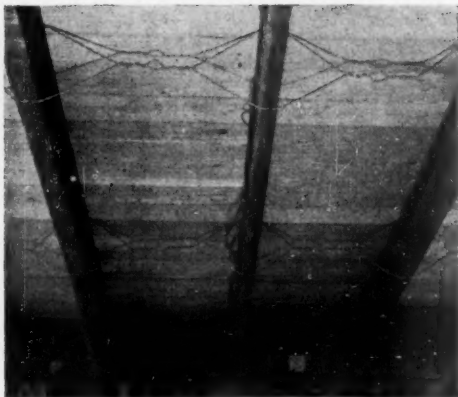
GROUND FLOOR PLAN

CROSS SECTION AA



Living room





Twisted wire floor-joist reinforcement replaces the normal timber herring-bone strutting.

Continued from page 544

folding the sheet. It is not necessary to scrim angles or joints between plasterboards.

The finished wall, irrespective of the fact that it is built of the cheapest sheet material available and is simple and quick to erect, will compare favourably for strength and solidity with walls built of breeze blocks or other partition slabs. It also has the great advantage of eliminating architraves and cover strips, as frames formed in the wall become part of the structure and are restrained mechanically throughout their length. Again, the wire reinforcement automatically insures against cracking.

Floor Joist Stiffening

An interesting innovation is a simple patented device to stabilize first floor joists. Normal herringbone strutting has been replaced by flexible metal reinforcing formed of two strands of galvanized wire twisted together and supplied in coils.

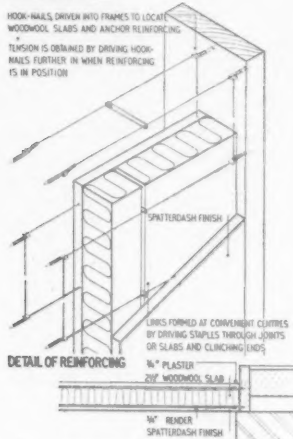
This reinforcing is fixed by passing a length along the top of the joists and a length along the underside of the joists, then forming diagonal braces by twisting the top and bottom together with a suitable lever-like tool. The braces are then locked by the simple expedient of driving a nail between the two strands of wire that form the reinforcing and into the top and bottom of each joist.

Although the cost of the reinforcing is only a fraction of the cost of the timber strutting it replaces and is fixed in much less time, the efficiency of the device can be best judged by the fact that its use tends to lift the floor in the centre. This extra strength is not necessary under normal conditions and the floor joists have therefore been reduced from 7in x 2in to 7in x 1½in at 18in centres. The saving effected by the device is not only on replacing herringbone strutting with the reinforcing but also a 25 per cent reduction on the amount of timber required for floor joists.

Finishes

The finishes used are not essential to the system and may, of course, be varied from job to job. For the houses already built, the finishes are as follows:
External. Bricks: "Cotswold" colour concrete bricks.

SINGLE SKIN PANEL

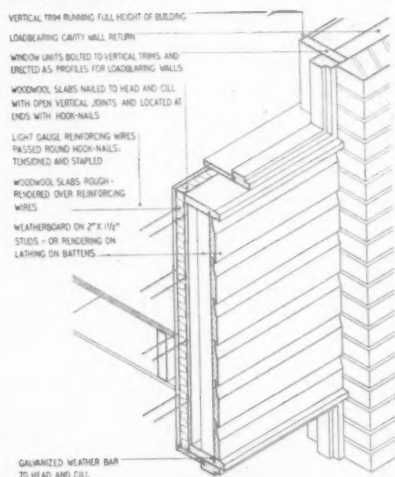


PLAN SINGLE SKIN PANEL



PLAN DOUBLE SKIN PANEL

DOUBLE SKIN PANEL



LETTERS: PATENT No. 645550
PATENT APPLICATION No. 1913751
DESIGNS: APPLICATION Nos. 805500-02

ISOMETRIC OF TYPICAL NON-BEARING WALL AT FIRST FLOOR

Non-load-bearing wall details

Apron walls to windows: dark red cement spatter-dash on rendering. Roof: dark grey interlocking tiles. Rainwater goods: pressed steel box gutter and steel tube downpipes. Ironwork and woodwork is painted.

DETAILS OF REINFORCING

HOOK-NAILS DRIVEN INTO FRAMES OR PLUGS TO LOCATE PLASTERBOARD AND ANCHOR REINFORCING WIRE. TENSION IS OBTAINED BY DRIVING HOOK-NAILS FURTHER IN WHEN REINFORCING IS IN POSITION.

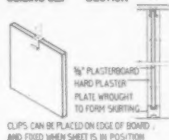
LINKS FORMED AT CONVENTIONAL CENTRES BY DRIVING STAPLES THROUGH PLASTERBOARD & CLINCHING ENDS.

DETAIL AT ANGLE

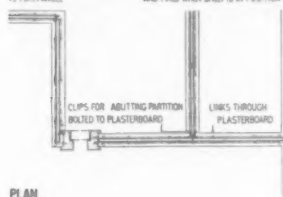


PLASTERBOARD CUT AND FOLDED TO FORM ANGLE

CEILING CLIP SECTION



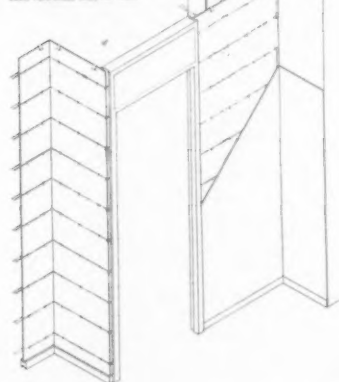
CLIPS CAN BE PLACED ON EDGE OF BOARD AND FIXED WHEN SHEET IS IN POSITION



PLAN

ERECTION SEQUENCE

1. PLATES, FRAMES, AND HOOK-NAILS
2. PLACE PLASTERBOARD IN POSITION
3. LINK COMPONENTS TOGETHER WITH REINFORCING WIRES
4. APPLY HAND PLASTER TO FORM A SOLID REINFORCED WALL 1 3/4" THICK

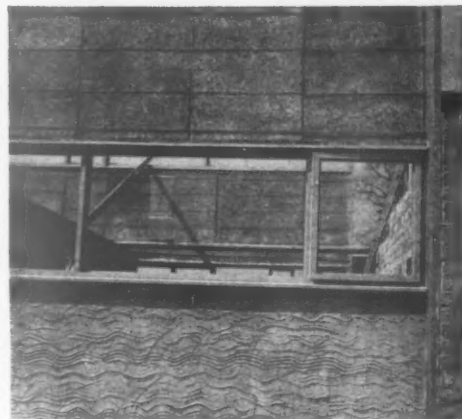


ISOMETRIC PROJECTION

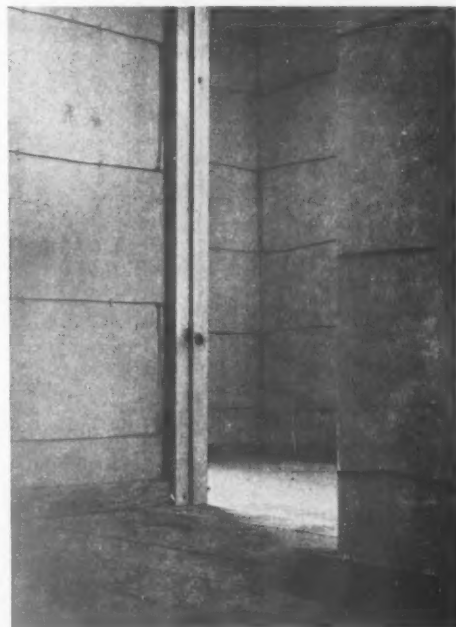
finished partition thickness: 1 3/4"

LETTERS PATENT No. 640500
PATENT APPLICATION No. 933779
DESIGN APPLICATION No. 805500-62

partition details



Above the window are wood wool slabs of the wall panel with stretched wire reinforcement. Below the window are similar panels after rendering.

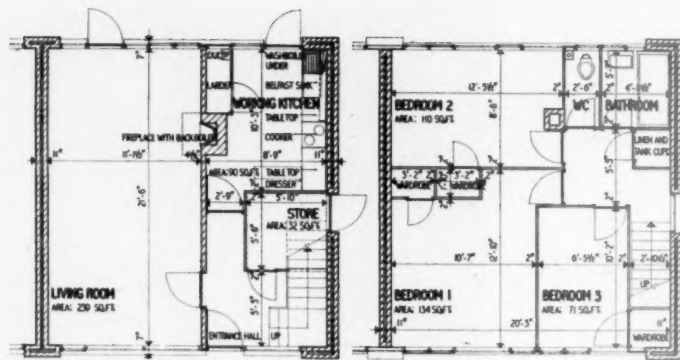


Partitions before plastering. The 3/4" plasterboard core rests on a timber bottom rail which acts as a skirting both sides. Reinforcing wires are held by hook-nails driven into the surrounding frame.

Internal. Generally : Distemper. Doors and cupboards : wood varnished. Miscellaneous woodwork (skirtings, etc.) : distemper, varnished. Brick walls, unplastered : distempred.

Services for Type I. Internal plumbing: water heated by electric immersion heater in lagged cylinder. Electric power points (on ring main) and light points on all mains. Gas cookers and gas wash boilers. Main

Continued on page 548



GROUND FLOOR PLAN

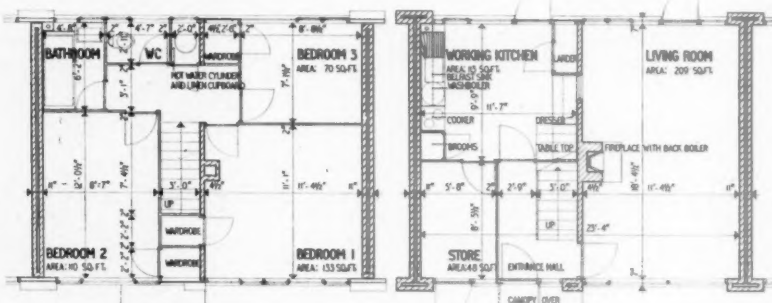
FIRST FLOOR PLAN

TYPE 2
semi-detached
floor area: 840 sq. ft.
+ store: 32 sq. ft.

TYPE 3
terrace house
floor area: 810 sq. ft.
+ store: 48 sq. ft.

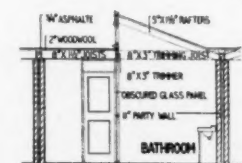
HIGHWORTH HOUSES

TYPE 4
terrace house
floor area: 710 sq. ft.

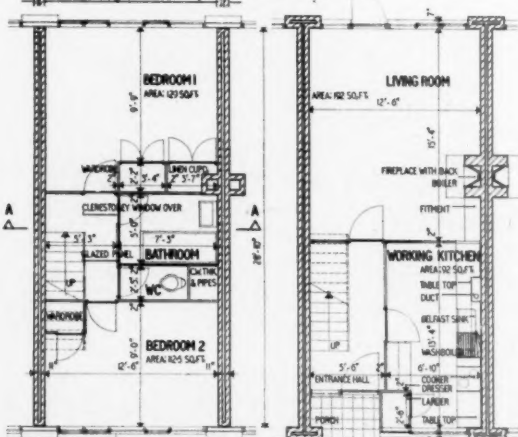


FIRST FLOOR PLAN

GROUND FLOOR PLAN



SECTION AA



FIRST FLOOR PLAN

GROUND FLOOR PLAN

Continued from page 547

public utility service connections for water, gas, electricity and drainage.

DETAILED COSTS

The cost of a pair of Type 1 houses similar to those built at Highworth, (but including for the additional protection to external non-load-bearing walls referred to earlier) is estimated to be £2,576 per pair, or £1,288 per house at current (September 1951) price rates, inclusive of outhouses and external works within the curtilage of the houses. This amount would be reduced for other house types designed to the Ministry's latest requirements (Circular 38/51) and referred to in the last paragraph.

The figure is based on Bills of Quantities, prepared in accordance with the principles of the Code for the Measurement of Building work in small dwelling-houses and priced at current rates for an assumed contract (based on the latest Form of Contract issued by the

R.I.B.A. adapted for the use of Local Authorities) of about 20 dwellings in the A2 district grade classification area on a flat site.

Some variation in cost would result according to the number of dwellings in, and the location of, different contracts, but the comparison of cost with a traditionally constructed house referred to below would remain valid.

The same percentages for contractor's Head Office and overheads and profit have been allowed in each case in this comparison, but it must be borne in mind that there is no guarantee that a contractor tendering would pass on the full benefit of the economies in design to the employer, and that advantage may be taken of known "permissible costs" and of the comparatively low cost per foot super of this house in individual tenders. This is unavoidable but does not affect a true comparison.

The cost of the Type 1 house at current price rates (inclusive of outhouse and of external works within the curtilage of the house) is estimated to be somewhat more than £100 cheaper than the normal equivalent traditional council house, whilst the cost rate per foot super of floor area is estimated to be about 2s. 2d. less. A comparatively greater saving would result on a sloping or difficult site through a comparatively larger reduction in cost of foundations. This is a not unimportant point as few sites reach the ideal.

The reasons for the savings in costs are summarized in the following items:—

Type 1 Highworth house—Estimated saving per house

Foundations and sub-structure	£13	0	0
Non-load-bearing walls	£35	0	0
Internal partitions	£8	0	0
Metal joist reinforcement and consequent saving in timber floor joists	£9	0	0
Simplified roof construction	£14	0	0
Staircase	£4	0	0
Layout of plumbing system simplified	£5	0	0
Electrical installation and saving in chasing, etc.	£5	0	0
Fairface brickwork in living-rooms and bedrooms	£4	0	0
Outbuilding roof	£2	0	0
Miscellaneous	£5	0	0
Total	£104	0	0

These figures are based on the following Basic Costs (subject to fluctuations):

(a) Wages—Craftsmen, 3s. 0½d. per hour
Labourer, 2s. 7d. per hour

(b) Principal Materials.

Portland cement including bags, ton	£4	14	9
Lime, ton	£5	9	0
Building sand, yard cube	12	6	
Plastering sand, yard cube	16	0	
1½in Aggregate, yard cube	14	0	
Fletton bricks, 1,000	£5	0	0
4½in Breeze Blocks, yard super	5	0	
Softwood timber for carcassing (to include for all lengths and sizes as required and for delivery to site), standard	£120	0	0
½in T. & G. flooring, standard	£125	0	0
1½in wood-wool slabs, yard super	6	9	
½in plasterboard, yard super	2	2½	
Plaster, ton	£5	19	3
No. 14g. galvanized wire, cwt.	£3	15	0
Copper tube, lb. basic	2	2½	
(Plus C.T.A. extras)			
Ceilingite, cwt.	£1	10	0
Distemper, cwt.	£5	0	0
Varnish, gallon	£2	5	0

The Quantity Surveyors were put in possession of all the facts so far as the contract for the pair of demonstration houses at Highworth is concerned, and they also had access to the actual net costs of labour and materials incurred by the small country builder responsible for their erection. Whilst taking this data into account, it was felt advisable to base the estimated cost in this report on the above-mentioned average condition, although it should be stated that the actual costs incurred indicate that the Quantity Surveyors' estimated computed costs are slightly on the high side.

Type plans

The approximate estimates of cost of the other type plans and designs illustrated, which are based on requirements of M.O.L.G.P. Circular 38/51, are:—

Type 1 House, as built	£1,288
Type 2 House, 3 bedroom with pitched roof	£1,230 (semi-detached)
Type 3 House, 3 bedroom with pitched roof	£1,210 (terrace, in block of 8)
Type 4 House, 2 bedroom with flat roof	£1,150 (terrace, in block of 12)

These costs are based on the estimated cost rate per foot super of floor area of each type.

Back elevation, Highworth houses



IN PARLIAMENT

Restriction on New Building

IN the new Government which has taken office after the General Election, housing has been given a leading place in the functions of the former Ministry of Local Government and Planning. The "planning" has gone from the title, "local government" has taken second place, and the title of the Ministry has become "Housing and Local Government." The target figure of 300,000 houses a year, which has figured prominently in Conservative Party speeches, is omitted from the King's Speech, in favour of the less specific sentences—"My Government will do their utmost to stimulate the building of new houses for my people, using to the fullest extent both public and private enterprise. Their housing policy will have regard to the desire of many people to own their homes and to the special needs of the elderly."

It has become usual for the activities permitted to the building industry to reflect the economic circumstances of the nation. Growing difficulties mean restriction; prospective easement permits expansion. This is just as applicable in the case of the new Government as of those who preceded. The new Chancellor of the Exchequer, Mr. R. A. Butler, in his initial proposals for reducing the current deficit between earnings and purchases, presented to Parliament on November 7, against the background of "a grave statement," measures for restricting home investment which bear directly on building projects.

In the frank analysis of the critical economic circumstances which he presented to the House, Mr. Butler said plainly that unless the overseas deficit was corrected we should find ourselves lacking the materials to maintain employment and the present level of rations. We should be bankrupt, idle and hungry. The only ultimate solution must be one of expansion. The Government were determined to get output up, and would co-operate closely with the industries concerned and the trade unions. But that was a long-term objective, and there must be immediate and direct action to reduce imports. This was to be done to the tune of £350 millions, and to the list of detailed measures which he enumerated to secure this result he added that the Government were giving prompt consideration to the reversion of all softwood purchasing to private trade, with arrangements for a global limitation of purchases. It was intended that the consumption of softwood should be maintained at its present level.

In the sphere of home investment he spoke first of the building programme. That authorized by the previous

Government last summer rested on the assumption that the output of the building industry would increase by five per cent in 1951 and 10 per cent in 1952 over the output in 1950. In the first half of 1951, however, the output of the industry was below the average of 1950; due partly to bad weather, partly to the shortage of building steel, and partly "to the attempt to do too much in the wrong way." The combined result of all these factors was that the building industry was now badly overburdened. Much more work had been started or approved than could be done with the labour and materials—particularly steel—available. Consequently, individual prospects had been taking longer to complete than ever before, and this would get worse unless the burden on the industry was quickly lightened.

The only way to do this, particularly in areas where the excess demand was greatest, was to reduce the amount of new building work started until the industry was abreast of its tasks, and to secure that the subsequent programme did not exceed the capacity of the industry at any particular time. To do this, and to speed up the completion of projects, the Government had decided that no new starting dates for building work would be granted for operation during the next three months, except for special schemes approved as exceptionally urgent in the national interest. Starting dates already granted for operation after December 1 would be reviewed and postponed for at least two months, again subject to special exceptions.

This decision would not apply to housing, which used very little steel, but the rate of starting new houses would be adjusted where this was necessary to improve the rate of completion and reduce the time taken to build houses. These measures should result in more building work of all kinds being actually completed in 1952 than would otherwise be possible, and they would stop further increases in the overload. It was the Government's intention to build more houses, but satisfactory progress could not be made until the overload on the industry had been dispersed and some of the existing work completed. After that they intended gradually to introduce more housing into the building programme, which would be possible because housing would be able to absorb labour and materials released from other building work held up because of the shortage of steel.

Mr. Butler declined to expand his statement, and left questions by M.P.s which could be summed up in the phrase, "How many houses next year?" to be answered by other Ministers in subsequent debates. One other of his proposals bore directly on housing—the increase in the Bank rate, and the increase in the rate of advances to local authorities by the Public Works Loans Board to the appropriate market rate of 3½ per cent. The rate at which

local authorities mainly operated, 3 per cent, contained, he said, an appreciable element of concealed subsidy. A change was considerably overdue. But in the case of housing, if no other arrangements were made, the result would be to impose on local authorities the responsibility of financing the increased charges either by increased rates or higher rents. The Minister of Housing and Local Government and the Secretary of State for Scotland proposed, therefore, to advance the date of the regular review of the housing subsidy—due next June—and to open discussions forthwith with the local authorities. The increase in the interest rate would be one factor in these discussions, which it was intended should go as wide as the circumstances required and should not rule out consideration of any changes in the present structure of the subsidies if that was found desirable.

The general observations of the former Chancellor, Mr. Gaitskill, on this speech were—with some reservations deriving from the Labour Party approach to economic and social questions—in support. He did quarrel, however, with the proposal to let softwood purchasing revert to private enterprise. When the former President of the Board of Trade passed the European trade back to private enterprise he did so because he felt it necessary to achieve the necessary imports. There had been a very high level of timber imports recently, but it had been at extremely high prices, and the Chancellor should consider the danger of prices going up still further. He also questioned the prospects held out in regard to housing. Was it to be understood, he asked, that no factory building whatever would be started in the next three months, no hospitals, no schools? The Labour Government had stopped new office building some months ago. What was the future housing figure to be? It was being less than frank to say that the housing programme could be continued at about the present level and also carry out the defence programme and do the minimum of essential industrial investment. These matters would certainly be probed by Labour members very much further.

Mr. Dalton was one of those on the Opposition front bench who continued to probe, with the warning that the Government would find the local authorities taking the strongest exception to the proposal for higher interest rates on loans. Unless the readjustments in the housing subsidy made up the whole of what the local authorities would lose by the more costly borrowing they would not be appeased; and if the subsidy was increased, there would be another example of increased Government spending. The higher rate would increase the cost of house building, it would fall upon rates or rents, or both, and would increase the cost of living.

(From our Parliamentary Correspondent)

INFORMATION

"The Architect and Building News" stand is G.142. The nearest approach is the Addison Road entrance. Readers who want further information about any firm or product are invited to enquire or leave a written request at the stand. From last week's Guide Number of "The Architect and Building News" readers will no doubt have noted particular items they do not want to miss. Many of the products mentioned last week are illustrated in the following pages. An alphabetical list of firms' names is given in this issue on page 565. This list is keyed to the plans on pages 566-568.

A pictorial review of new products starts on page 554. This is followed by a comprehensive report, illustrated and classified under different types of product.

Carry your copy with you as an "aide memoir."



H. R. G. MONTGOMERY,
M.C., Hon. A.R.I.B.A.
Organizer of the Building Exhibition

REPORT

on the Twenty-Fourth

BUILDING EXHIBITION

NOVEMBER 14-28 OLYMPIA

RESEARCH is sometimes referred to as if it were something new. But progress of any kind has never been possible without research. Before a commercial firm can market any new product there must be much research. Proof of this is in the new developments in Building Technique which are to be seen at this exhibition, many of which are described and illustrated in this report. But research on a national level is relatively recent. And no visitor to the Building Exhibition should miss the displays of the D.S.I.R. and the various Ministries, which demonstrate some of the more recent advances in research which are now being put into building practice. Some of the more interesting exhibits dealing with research work are dealt with on this page. In the plant section of this report the D.S.I.R. display of mono-tower cranes is described at some length.

An exhibit on aerated concrete, prepared by the Building Research Station will be included in the D.S.I.R. stand (Gal. 451). A new 16 mm sound film on the subject will be shown daily in the D.S.I.R. cinema adjoining the Stand.

Aerated concrete is a comparatively new building material. It is already widely used in the Scandinavian countries and its production and use in this country is now increasing rapidly. It is becoming important that architects, engineers and builders should be informed of its possibilities and limitations.

A selection of exhibits of current research results that appear to be of immediate practical value to the building industry is shown on the same stand. The subjects include handling materials on housing sites, the principles of good lighting, the design of steel and concrete bridges and the construction of parapet walls.

Several Government Departments are exhibiting. The exhibits have been designed and produced on their behalf by the Central Office of Information.

The Ministry of Housing and Local Government has two stands, each of which illustrates a theme. The housing stand has the device, "Skillful Design Lowers Costs," and the planning stand "New Towns—New Ways of Life."

Another section of the housing stand is devoted to the housing needs of old people, single workers, students, apprentices, disabled persons, district nurses, and midwives.

The building of new towns and the expansion of existing towns are parallel methods of dealing with the congestion and discomforts of living, for many, in our great cities and industrial areas. The first part of the planning stand shows where the concentrations of population are greatest, and then takes as an example the problem in Lancashire, and describes what is actually being done there. A map of the county indicates those towns from which some of the people and some industry ought to be moved, and those which can help to absorb it. This process has already begun to pass from the blue-print stage into actual bricks and mortar; a scale model and map are displayed of the development now in progress at Worsley to relieve overcrowding in Salford. Worsley is one of a number of Lancashire towns selected by the planning authority for early expansion.

The 14 New Towns are seen on a map, also in the first part of the stand. They are to be self-contained—work, recreation, social and other needs being met as the population grows. The rest of the stand tells how this is being done. The

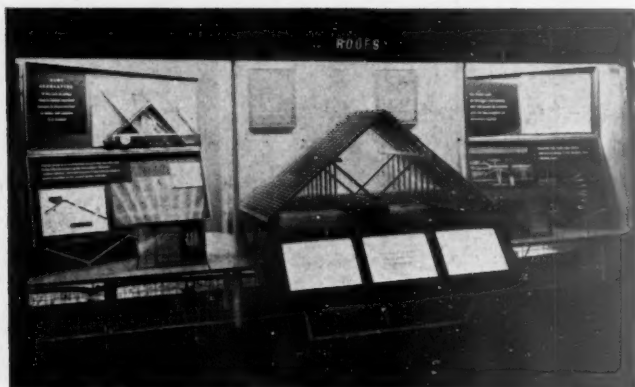
older established New Towns are now well under way.

The Ministry of Fuel and Power exhibit describes the technical advisory services which are available to assist industry in promoting the more efficient use of fuel and power. These services range from practical instruction in stoking to the provision of the means by which a comprehensive survey may be produced of the entire heat and power production and consumption of a factory or other industrial unit.

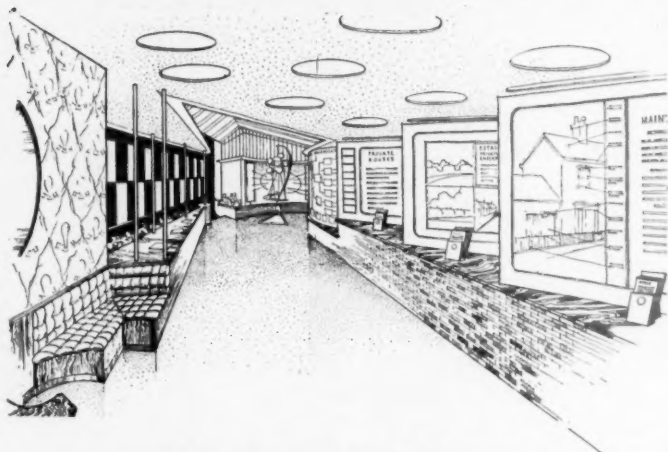
The survey work is undertaken by the mobile testing service of the Ministry and the methods adopted are shown by means of photographs, diagrams and letter press, with illustrations of typical results.

The exhibit shows how data relating to temperatures, pressures, work done, material handled, etc., are obtained by a wide variety of reading and recording instruments. The findings are then analysed by the fuel engineers of the Ministry whose reports to managements and works engineers make suggestions for immediate savings, for possible process changes calculated to give higher efficiency, and for longer term development in appropriate instances.

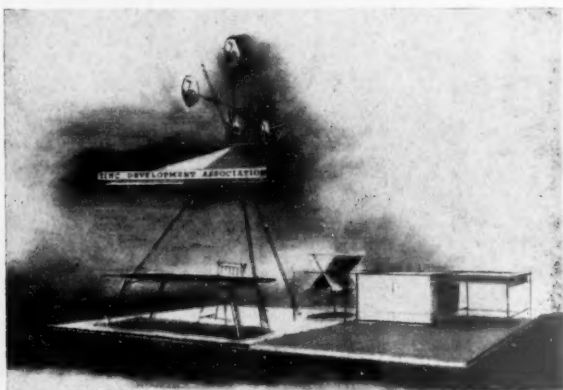
Recommendations based on surveys made by the testing service have suggested so far that savings of about 25 per cent in fuel consumption are possible generally in industry. The Ministry's technical services are designed to show that such savings can be achieved much more readily by precise measurement, calculation and study than by recourse to guesswork and rule of thumb methods. Information about other advisory services of the Ministry, and pamphlets and publications on fuel efficiency, will be available in this section.



Part of the Housing display on the M.O.W. stand (E.107). This is the roofing section showing inexpensive roof construction which fulfils all heat and strength requirements.



The interior of the N.F.B.T.E. stand designed by Kenneth Lindy F.R.I.B.A. (Gal. 482). Display scenes illustrate the work of the private enterprise house builder, apprenticeship, maintenance, etc.



The Zinc Development Association stand (D82) designed by Stephen Buzas of James Cubitt and Partners.

PROGRAMME OF EVENTS

MEETINGS IN CONFERENCE ROOM

- Sat. 17 : p.m. Guild of Bricklayers.
 Mon. 19 : p.m. Institute of Clayworkers.
 Tues. 20 : all day. National Federation of Clay Industries.
 Wed. 21 : Co-operative Building Managers' Association.
 Thurs. 22 : 5.30 p.m. Institution of Sanitary Engineers.

MEETINGS IN EMPIRE RESTAURANT

- Wed. 21 : a.m. Architects' Benevolent Society.
 Sat. 24 : p.m. Inc. British Institute of Certified Carpenters.
 Mon. 26 : a.m. S.E. Brick and Tile Federation.
 Tues. 27 : a.m. National Council of Building Material Producers.

LECTURES IN CINEMA OFF NATIONAL HALL GALLERY

- Sat. 17 : 3.00 p.m. "The Builder," "Low Cost Housing," by A. W. Kenyon.
 Tues. 20 : 3.00 p.m. T.D.A. "Decorative and Structural Uses of Timber," by J. R. M. Poole.
 " 20 : 5.45 p.m. T.D.A. "Sound Practice in the use of Timber," by Alwyn Jay.
 Thurs. 22 : 3.00 p.m. "The Builder," "Building Opportunities in Canada," by I. M. Leslie.
 Tues. 27 : 3.00 p.m. T.D.A. "Sound Practice in the use of Timber," by Alwyn Jay.
 " 27 : 5.45 p.m. T.D.A. "Decorative and Structural uses of Timber," by J. R. M. Poole.

ARRANGED VISITS

- Tues. 20 : National Housing and Town Planning Council.
 " 20 : Institute of Heating and Ventilating Engineers.
 " 20 : N.F.B.T.E. Reception and tea in the Pillar Hall.
 Wed. 21 : London Builders' Foremen's Association.
 Thurs. 22 : Worshipful Company of Tylers and Bricklayers.
 " 22 : Incorporated Society of Estate Clerks of Works.
 " 22 : Committee of the Faculty of Architects and Surveyors.
 Fri. 23 : Institute of Structural Engineers.
 Sat. 24 : Provincial Members of Institute of Quantity Surveyors.

L.M.B.A. AREA DAYS

- Mon. 19 : Central Area No. 1.
 Tues. 20 : Central Area No. 5.
 N.F.B.T.E. President's Day.
 Wed. 21 : Central Areas No. 2 and 4.
 Thurs. 22 : Northern Area.
 Fri. 23 : Central Area No. 3.
 Mon. 26 : Southern Area.
 Tues. 27 : North-Eastern Area.
 Wed. 28 : South-Eastern Area.

FILMS IN CINEMA OFF NATIONAL HALL GALLERY

A Government film will be showing all day on each of the following dates : November 19, 21, 23, 26, 28. A private showing of an N.F.C.I. film will take place at 12 noon on November 20, and will be open to the public at 5 p.m. on November 22 and 24.



THE OPENING CEREMONY

Left: The Minister of Works, the Rt. Hon. David Eccles, spoke before declaring the Exhibition open. Points from his speech are reported on this page. Below: Mr. A. Graham Henderson, President of the R.I.B.A., who introduced the Minister, and Mr. Stephen Hudson, President of the N.F.B.T.E., who proposed the vote of thanks, listen with apparent approval.



"TAKING THE FEAR OUT OF FREEDOM"

Government policy for the industrial front was summed up in three short sentences by the Rt. Hon. David Eccles, M.P., when he opened the Building Exhibition on November 14th. The policy is, first, to disentangle ourselves from badly chosen and over-extended commitments. Second, to concentrate resources for attacking the old problems in new ways, and third, to make fresh records in production where production is most needed.

The Government were not contemplating permanent retreat nor were they resigned to eking out a lower standard of life in patient austerity. Efficient expansion, Mr. Eccles said, was the keynote of the Exhibition, and this was exactly what the nation was looking for. There could never have been more need for output. But the new Government, the Minister said, "inherits a half-bankrupt economy. Britain's cupboards are bare and her debts have grown embarrassingly large."

"Therefore," said Mr. Eccles, "we have no option but to reduce for a few months the rate of starting new buildings except defence work of high priority and houses. This cutting-back is unavoidable and has been welcomed by the industry. But once the excessive load has been worked off and the industry has recovered its breath we shall call on you to apply the lessons of this Exhibition and to expand your output to levels never before achieved."

"But then you will ask me, where are the materials coming from? I cannot speak for steel and timber except to say that whatever building programme the Government puts forward will be matched by an adequate supply of both these materials. We are not pessimistic."

Take, for example, bricks: there must be something wrong, but curable, when a shortage of production in the brickfields, due in part to shortage of labour, causes

men to go slower on the building sites than they would if they were assured of a supply of bricks.

The Minister said he would talk this over with the brickmakers and ask them to tell him, for a change, how output could be increased; he could then go to his colleagues for the help which practical men had convinced him is necessary. That same method of consultation followed by action was what the Government intended to apply to other scarce materials.

"The Government want managers and

men to work faster without loss of standards, to earn more by doing so and to keep more of what they earn."

The Minister asked whether the Government could count on the support of the industry. If there were employers who did not wish freedom or who, because they were managing all right at present, feared to take risks, then, said Mr. Eccles, "come round to Lambeth House and borrow some of our courage. We must all make it our business to take the fear out of freedom."



THE ARCHITECT AND BUILDING NEWS STAND G 142

THE EXHIBITION IN PICTURES

A first tour of the Exhibition on the day before opening presented the usual scene of apparent chaos—chaos which miraculously turns to order overnight. In a whirlwind visit at such an early stage it is not possible accurately to assess the overall quality of the display. But there are undoubtedly many eyecatchers at Olympia this year.

Looking down from the gallery on the Grand Hall the jig-saw pattern of stands on the ground floor is overlooked—almost presided over—by the impressive back elevation of the N.F.B.T.E. stand in the centre of one long side of the gallery.

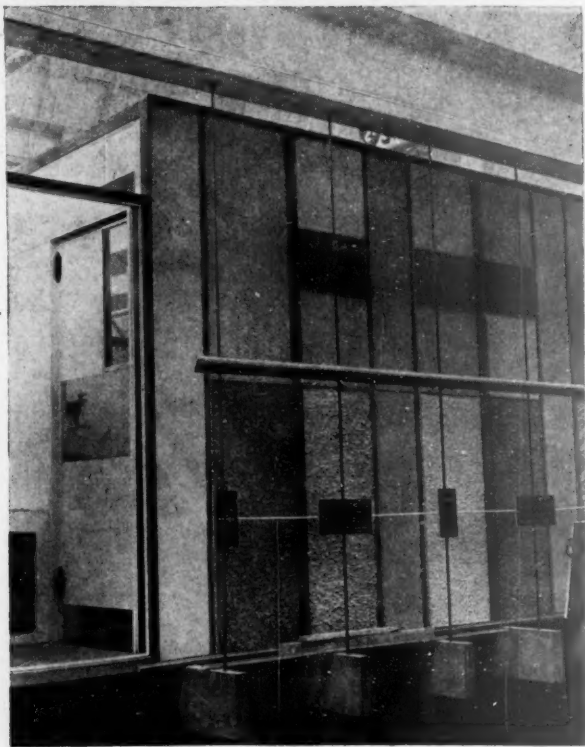
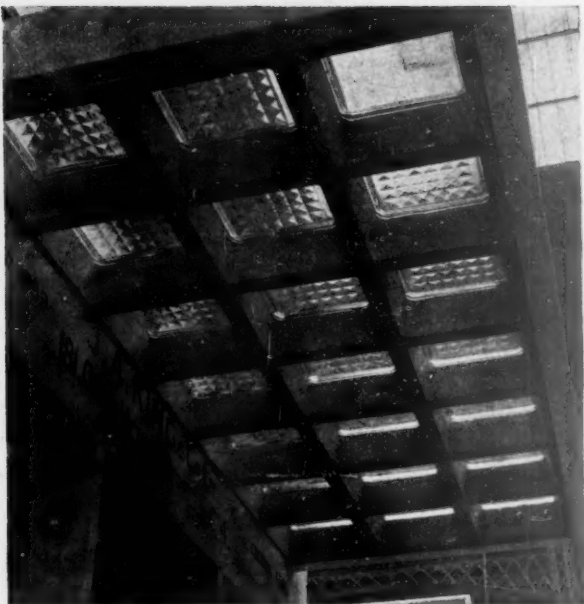
Stands which have been seen in the form of perspective drawings in some cases create a strangely different impression when seen in actuality. Some are better, some worse than the artist's impression.

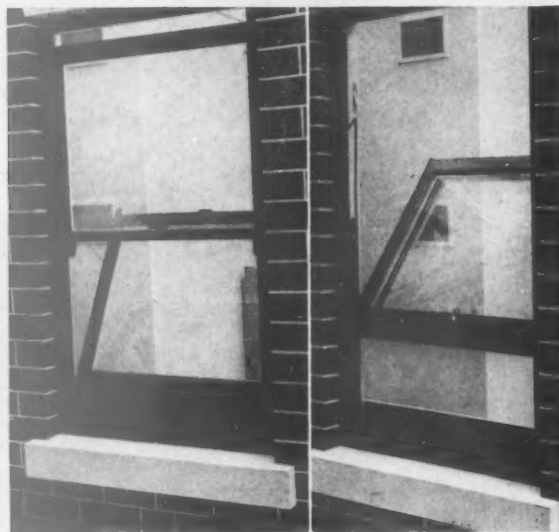
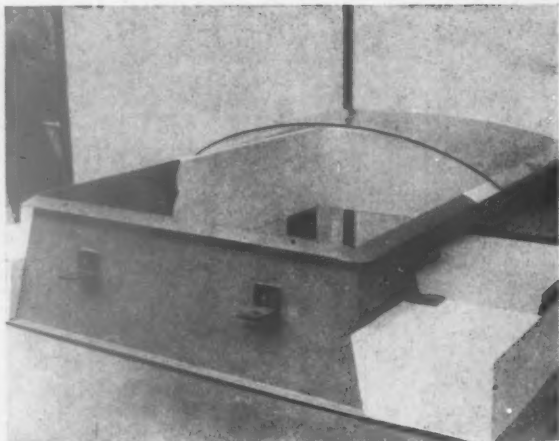
There is generally an outstanding design, and—with the reservation that no stand can be adequately judged until it is complete—it is safe to say that Williams & Williams have a design of considerable merit and interest.

The Cement Marketing Company, part of whose stand is illustrated left, have a stand of great structural interest. The exhibition space is carried on pre-stressed joists suspended by delicate rods from a main reinforced concrete frame. The wall facings show different types of rendered finish.

The upper picture on this page shows the canopy over one side of the stand of J. A. King & Company. The 12-in x 12-in lenses in this canopy are a new development by this firm. As described on a later page in this issue roof lights made up with this type of construction can span up to 15 feet.

Another glazing exhibit which will undoubtedly attract the interest of architects is the new type of framing for curved rectangular dome lights which are shown by T. & W. Ide on Stand O285. A model, cut away to show the method of setting the frame in a flat roof, forms the centrepiece of this display. A photograph of this model is on page 555 (top right). In the ceiling of the stand are two examples of this type of lighting. One shows the old system where the framework to the opening had to be built in timber or other facing, the second example shows the new-type frame. The sides of the frame slope slightly and the appearance and sight area through the glass are a great improvement on earlier methods.





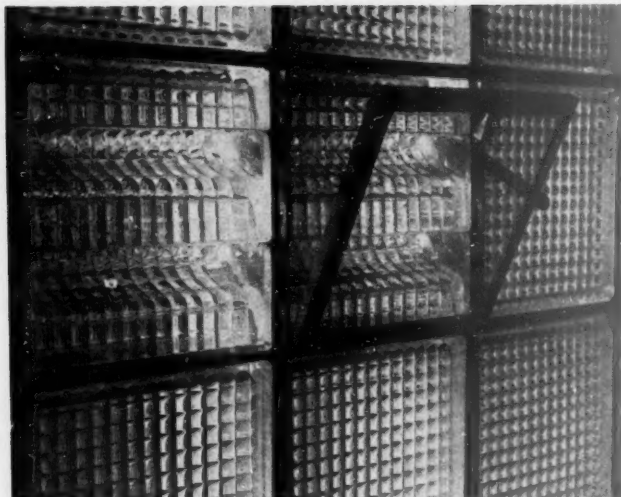
It is apparent that many exhibitors, fully aware of the importance of reducing building costs, have made efforts to market new products with the economic factor in mind. Amongst such exhibits is a new window by Sharp Brothers & Knight, Stand P 292.

The Minicost, as this wooden window is called, consists basically of two vertically sliding sashes. There are no counter-balance weights. The scantling of the framing is thereby reduced in size. Each sash is connected at its lower edge on either side to a chain running over a wheel recessed in the side frame. Thus when the lower sash is raised the upper sash is auto-

matically lowered. But this is not all. A release catch, springless, in the frame, allows the inner and outer sashes to fall inwards when required. As the pictures (bottom right, above) show, this provides numerous degrees of adjustment to the ventilation and also makes the cleaning of the outer faces of the glass a simple matter.

Furthermore, both sashes can be completely removed to allow for the entrance of a 4-ft double wardrobe or other furniture. Finally, it should be mentioned that the window is produced in a variety of types and sizes, all of which are made to brick dimensions in height and in width.

Exhibits on the opening days have to be taken as and when they become available for photography. Hence the fact that there is a jump here from windows to sanitary fittings. Three of new design are shown by Adamsez on Stand C 55. These are shown in the three pictures on the left of this page. From top to bottom they are:—Two versions of the firm's new Lotus lavatory basin and a new rimless closet. The flush is directed round the pan from the inlet at the back of the closet. The front edge is smooth and provides no recesses for dirt and germs to collect. Quite apart from its hygienic internal design this pan is a good looker externally.

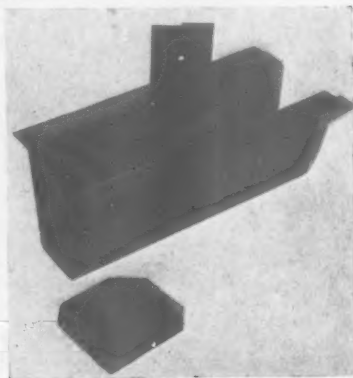
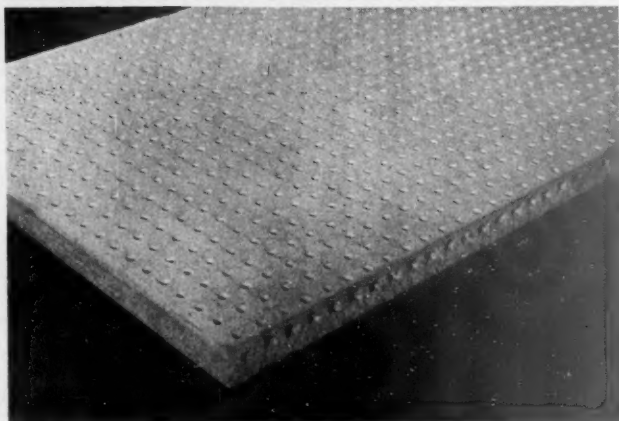


On a later page in this issue one of James Clark & Eaton's more recent patterns of ventilating glass brick is illustrated. At the top of this page is a refinement which is shown in the side wall of the firm's stand, L 237, at Olympia. To the block is attached a small glazed, hinged hopper with a retaining bracket arm and a spring catch. By this means the ventilation through these blocks can be controlled.

The centre picture on this page shows the new acoustic board shown by Tentest, Ltd., Stand F 130. It is a composite board having a relatively hard face of slightly corrugated texture. This face is perforated with holes as shown. The backing is of grooved absorbent board. The backing material is reinforced with light timber members in one direction and further reinforced by thin strips of hard board running at right angles to the timber reinforcing pieces. This board, known as "rabbit warren" acoustic board, has strength and is claimed to have very good acoustic properties. Its appearance is pleasing as can be judged from a section of the ceiling on the Tentest stand where "rabbit warren" is shown side by side with other boards.

In previous issues a new roofing material by D. Anderson & Son has been referred to as Thermolith. The name has now been changed to Andek. This roofing is shown on a swivelling panel on the firm's stand—F 126. See pictures at foot of this page. Briefly it consists of wood-wool slab, suitably treated and faced with layers of mastic roofing. The slabs are supported by "U"-section members. Into these "U" members light ties are fitted which pass through the slab. Over the top end of the tie a small flat plate is slipped and the ends of the tie are turned down. The individual components of this system of tying are shown below, right, and a clip in position, with the ends of the tie flattened to grip the slab, is shown in the larger picture.

Cloakroom fittings and furniture for schools, etc., are shown by A. J. Binns, Ltd.—M 257. Two of the firm's now popular fittings, of different patterns, are illustrated on page 557. Attention has previously been drawn in these columns to the strength and good design of the hook fittings manufactured by this firm. The hooks have secret fixings which pass through the tubular metal of the frame, thus making movement—either intentional or accidental, through working loose—an impossibility. Quite apart from the brightness of the coloured fittings here, a decorative wall feature consisting of foreign travel pamphlets, maps and other gaily-coloured literature does much to add life to



this display—one feature of which is that there is no overcrowding of the numerous exhibits.

Architects and designers interested in decorative glass should not miss the six delightful panels showing the new prototype glasses which Chance Brothers are showing. The panels are small and, with so many other attractive glass designs on this stand, might conceivably be overlooked. Illustrations of these glasses are given on page 558.

Two of these glasses have been designed by Mr. Beresford Evans. Interviewed on the stand Mr. Evans explained that he had been fortunate since Chance Brothers had given him a relatively free hand. No special type of design was stipulated. The general brief was that the new glasses should conform in design with the general theme of Earth, Sea and Air.

Two of the subjects designed under these three headings are shown on the following page. Representing broadly sea and air, the picture on the left is a star pattern, that on the right a ship design. Features of the star pattern glass are that the pattern can be turned in any direction. The placing of the stars is based on a combined square and lozenge unit pattern, the stars themselves are irregular.

Another star pattern, but in this case with regular five-pointed stars, has been designed by Sadie Speight. This glass is shown top left on the next page. Another pattern by the same designer is shown top right in the group.

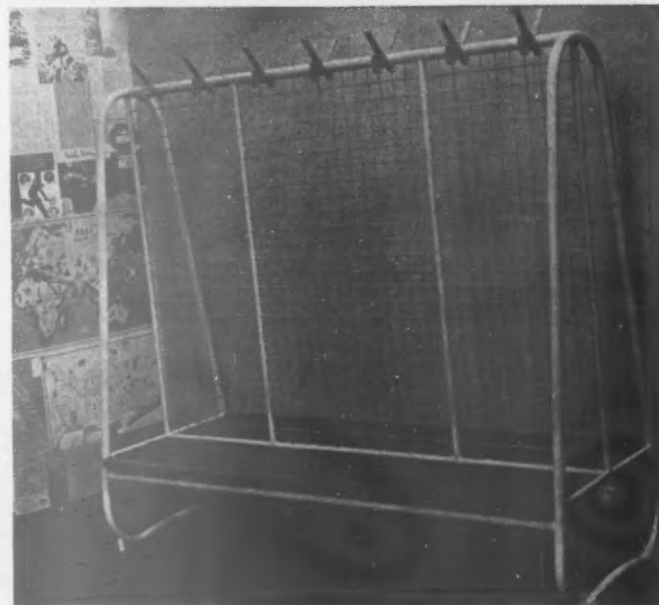
Two leaf patterns are shown at the foot of page 558. On the right is an all-over textured pattern designed by L. J. Harwood and on the left a design with a scattering of clover leaves in several sizes. This glass was designed by Fulton, Ltd., roller engravers of Glasgow.

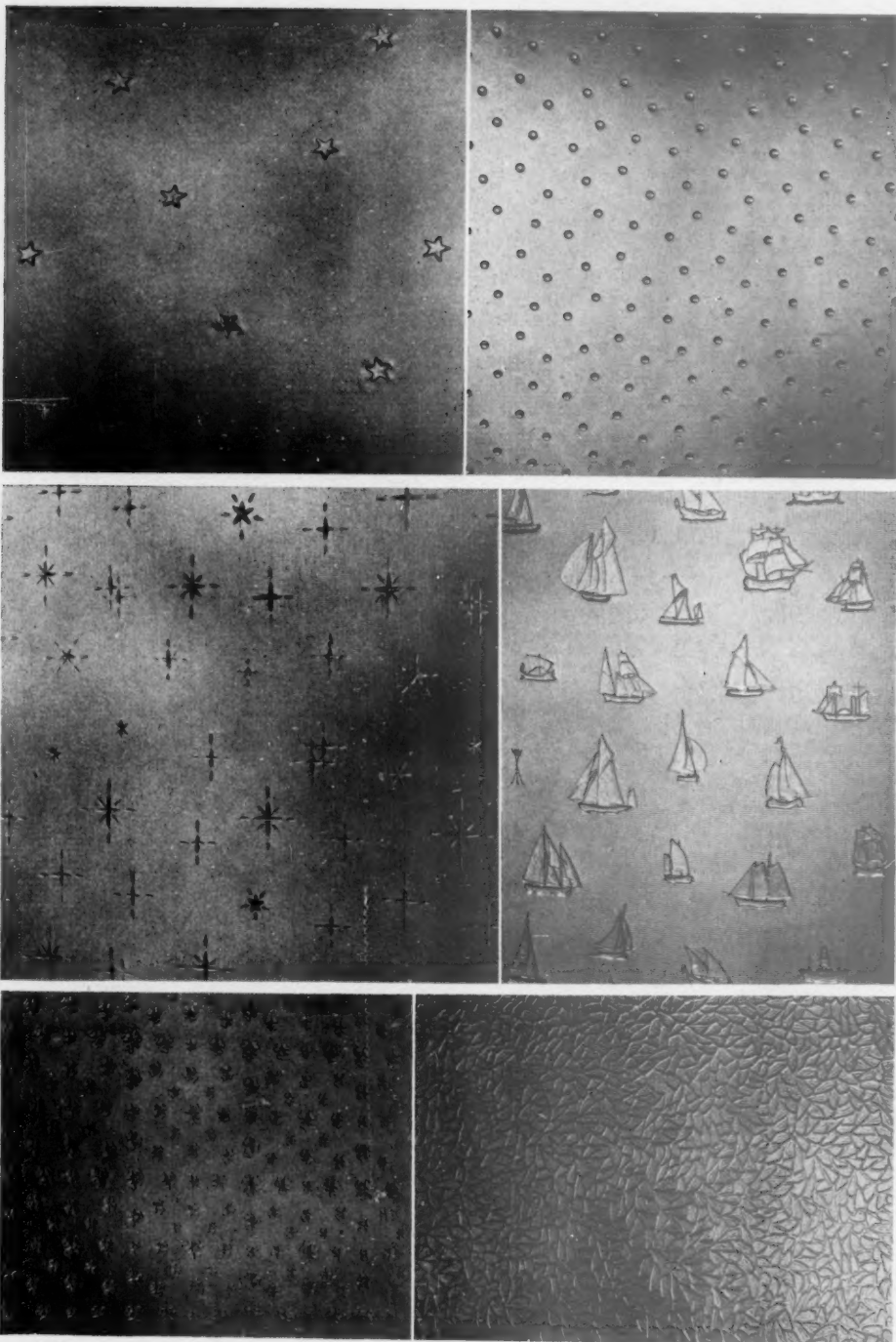
In a very different category—practical rather than decorative—is the glass tubing and traps provided by this firm to Econa Modern Products on whose stand, B 26, there is an interesting and informative demonstration. It has recently been stated that with three lavatory basin outlets discharging into one pipe with only one trap at the end of the run the tendency would be for the pipe to become dry and foul.

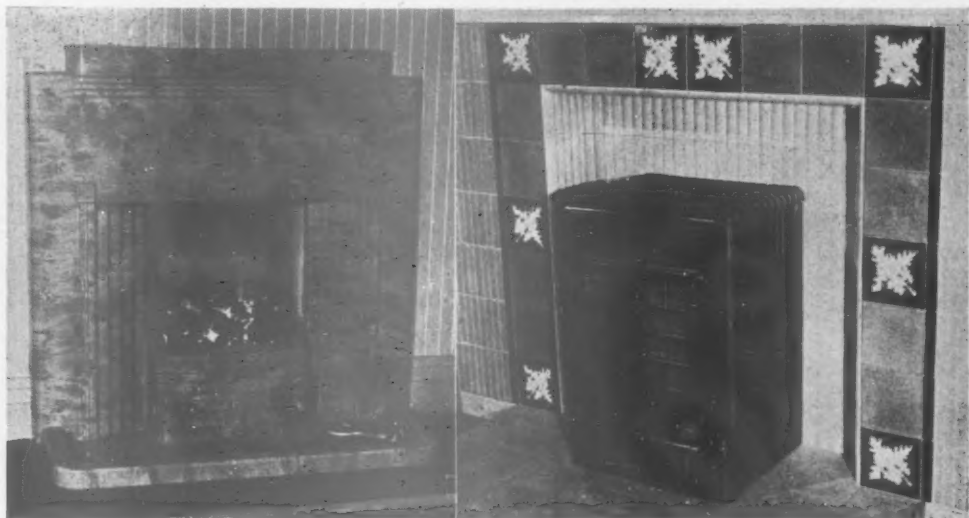
The display on Stand B 25 is designed to prove that efficiency depends on correct design. The proof as shown here appears irrefutable. In the worst condition, when only the last basin, i.e. that nearest the trap, is discharged the transparent piping makes it clear that the discharge runs back up the pipe to flush it. Note that it does not run up the waste pipes to the other basins.

On the other hand, any fear that the seal on the trap may be broken by simultaneous discharge of three filled basins seems unfounded. On an adjacent exhibit the effect of having the wrong fall is shown.

Talking of glasses, but in a somewhat different way, it should be mentioned—for those who are fortunate enough to sample the hospitality of the London Master Builders Association—that a new design of beer mat makes its appearance this year in the L.M.B.A. club room. Last year's mats apparently proved to be popular souvenirs. We are informed that few who visited the club room left without pocketing at least one. Therefore, for the benefit of those who may contemplate slight changes to their domestic colour schemes it may be helpful to know in advance that this year's mats have a bright red background on which the letters L.M.B.A. and the shield from the Association's coat of arms are picked out in cream. A most attractive mat but damning evidence if found in the wrong pockets.

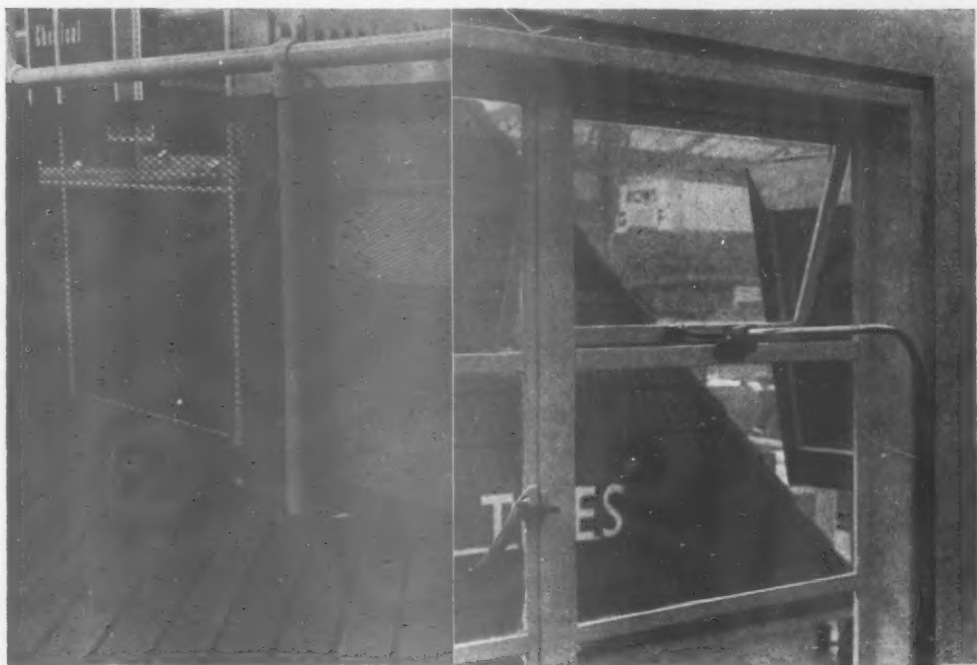


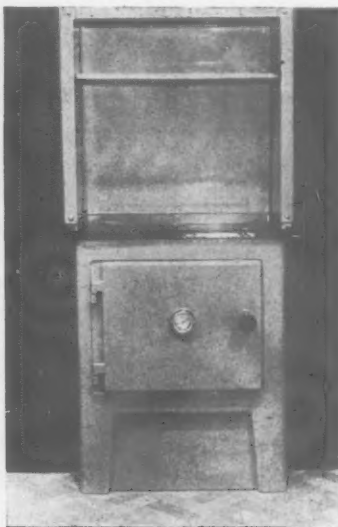
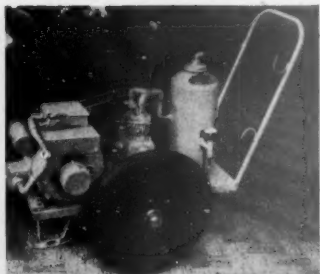




On this page above are, left, a new fire shown by the Solid Smokeless Fuels Federation on stand K 220, and right, a free-standing stove, the Sunray, which stands against a pleasing background of greyish-green tiles on the C.U.J.C. stand, M 254.

Below: left, two samples of the new flattened expament on the Expanded Metal Company's stand, E 95, and right, one end of the midget Teleflex window gear shown as a complete working unit by Williams & Williams on stand D 83.





Above left: A new underslung compressed-air gun shown by Aerostyle, Ltd., on Stand B 31; the firm are also showing the compressor illustrated top centre. In the lower central picture is the surprise item, an electric winch shown by A.C.E. Machinery, Ltd., O 281. The right-hand picture is of a new back-to-back grate to be seen on the stand of Allan Ure, Ltd.—L 246.

Three stands were spotted, showing new or recent examples of dry, prefabricated construction. Flexo Plywood Industries, Stand C 42, manufacturers of plywood, show a new cubicle suitable for W.C.s, swimming baths and the like of 3-in plywood core covered both sides with 24-gauge aluminium; the panels can be made to architects' requirements, although a standard panel 71 in x 59 in is manufactured. The panel is fixed to walls with cast alloy cleats and is 6 in above floors with pedestal feet, screwed to fixing and riveted to the partition. The price is claimed to compare favourably with pressed steel cubicles and panels are, of course, very light and portable. A good feature, which should be popular where children are to be catered for, is the cranking of the door hinges, which allows clear space to prevent fingers being pinched.

Gypsum partitions are the feature of Bellrock Gypsum Industries, Stand O 278, who have not shown at a Building Exhibition before. Two panels are shown. One consists of two self-finished plaster faces bonded to a "honeycomb" reinforced plaster core. This is marketed in various sizes and is suitable for external walls or partitions; it is claimed to be load bearing. The other panel is a single-skin Bellrock panel, self-finished, which should be useful as a lining to the inside of external walls. The panel is connected to the inner skin of a wall by ties, with a cavity between.

A prefabricated garage is featured by A.B.C.D., Stand N 275, known as the "Alborough." The garage is of pre-cast concrete post and panel construction which is assembled on a 4-in concrete raft floor over hard core. Suitable for single garages or lock-ups in batches, the price for a standard garage is under £100. The roof covering is of asbestos cement Trafford tiles supported on steel purlins. The concrete work is painted with a special chlorinated rubber paint manufactured by

The Inertol Co., Ltd. Stewarts & Lloyds, Stand N 272, is close to the A.B.C.D. stand and features a large picture of the biggest tubular steel job in the world at the Oil Mines, Corby, Northants. The work was carried out by the company and is now in operation. The stand is roofed with a tubular steel frame, and asbestos cement cladding is used in the "Unimer" building. These buildings, with spans varying between

18 and 30 ft, are suitable for farm and storage purposes. While on the subject of roofs, Cellactite and British Uralite's stand, L 244, are showing a new form of roof covering which may also be used for gutters and flashings. The price is only half that of zinc. Named "Nuralite", it is an asphalt-asbestos substance which is warmed and moulded to shape on the site. The firm is also showing lightweight hollow blocks made up into partitions, and flue linings built into flues.

A paint which is claimed to prevent further rust intrusion and creep is worth investigation. Goodlass, Wall & Co., Stand R 323, have recently marketed an improved stop-rust lead paint which has the rare feature of being manufactured in pale shades. Colour cards are available, it is understood, and those who are interested can see demonstrations of the paint being applied. While on the subject of paints, it may not be generally known that timber surfaces treated with "Cuprinol" wood preservatives can be painted over with Robbialac paints. This is demonstrated by Jensen & Nicholson at their stand, S 330.

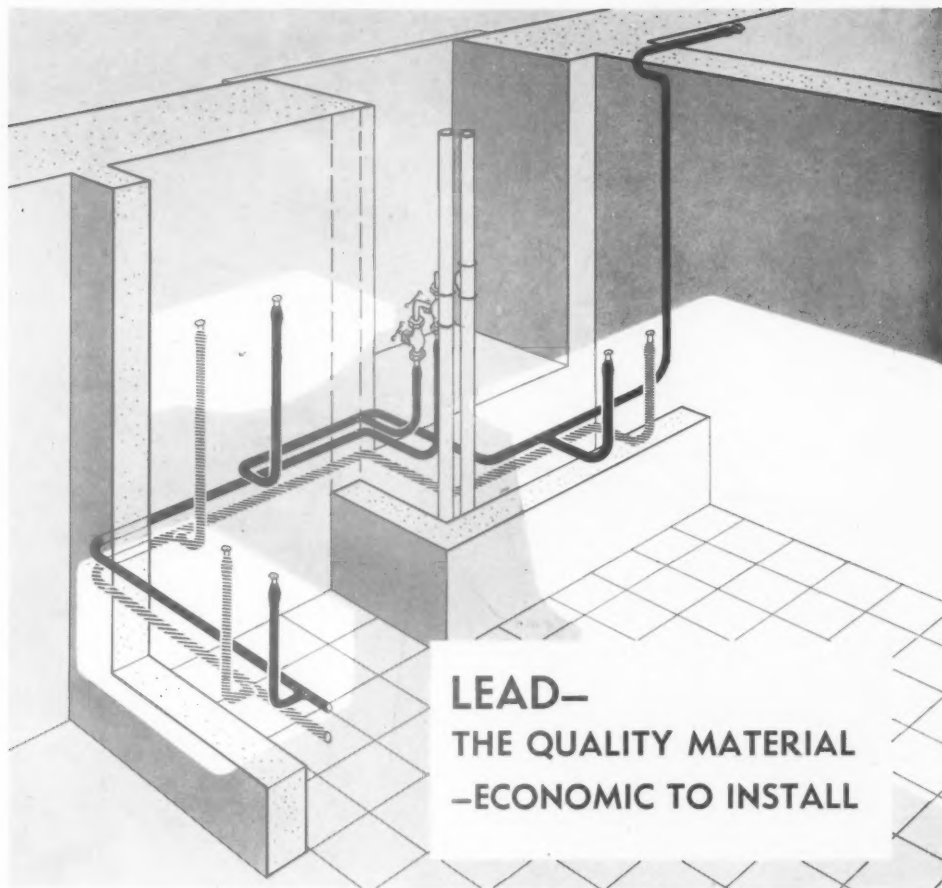
Among the complete range of surveying instruments shown by W. F. Stanley & Co., Stand S 335, are two relatively simple instruments which may appeal to many. One is a most reasonably priced theodolite for simple surveying work on building sites in steel erection, road construction, and so on. The other is a robust dumpy level equipped with a slow-motion adjustment and a circle for setting out, which is simplicity itself to work.

Some of the new-patterned "Devon" fires shown by Candy & Co., Stand F 135, feature some pleasing tiles in delicate pastel shades of green or blue in combination with the more conventional light fawns and browns. One of the new fireplaces with a stone effect is made in dull glazed falence, which has the advantage of being washable.

A classified report on exhibits follows.



W. J. Taylor, junior apprentice, of Twickenham, who won first prize in a model-making competition organized by the F.M.B., on whose stand, 436, the model of Holy Trinity Church on the Lansbury Poplar site can be seen



LEAD— THE QUALITY MATERIAL —ECONOMIC TO INSTALL

**LEAD SHEET and PIPE CAN NOW BE DELIVERED
IMMEDIATELY FOR ALL BUILDING WORK**

LEAD LASTS
The Technical Information Bureau of the Lead Industries Development Council is now in a position to solve all problems connected with the use of lead sheet and pipe in building work. Details of its application are given in a series of Information Sheets. These sheets are available to architects, surveyors, builders, plumbers and other technicians interested upon application to the Council. "Students" applications should be endorsed by an instructor or master of a technical school.

Well designed modern plumbing is compact in layout; for its strength and protection against frost damage, lead pipe and fittings are commonly fixed in direct, short connections, usually short, from the main to the appliances and fittings, have to be fixed in a confined space.

LEAD PIPE is also to be used in the most difficult circumstances. The flexibility of the material is such that it is easily connected up to the appliances and fittings without risk of leaving a permanent strain on them.

By specifying lead or lead alloy pipe to the relevant British Standards:

- B.S. 602/1949—Lead pipe for other than chemical purposes
- B.S. 603/1941—Lead pipe B.N.F. Ternary alloy No. 2 pipe
- B.S. 1085/1946—Lead pipe, Silver-Copper-Lead alloy

a material of consistent high quality is obtained.

LEAD INDUSTRIES DEVELOPMENT COUNCIL, EAGLE HOUSE, JERMYN STREET, LONDON, S.W.1

LEAD TECHNICAL INFORMATION BUREAU, 90 EBURY STREET, LONDON, S.W.1

TELEPHONE: SLOANE 0474
BBN 7/81

H



A really dependable gentleman who will never let you down. His activities are seen in the fine materials, sound construction and perfect finish of all Hills Grade One Doors. If you have not already made his acquaintance, drop us a line . . . we will be delighted to tell you more about him.

HILLS *Grade One* DOORS



Meet Mr. Value and Mr. Service — two more of the gentlemen who are guarantors of Hills high quality production.



SPECIALISTS FOR OVER THIRTY YEARS IN RECONSTRUCTION, REPAIR AND WATERPROOFING OF ROOFS, GUTTERS & ROOF GLAZING

INDUSTRIAL ENGINEERING LTD. undertake at short notice, subject to the availability of supplies, the erection or replacement of asbestos or Corrugated Iron Roofing as well as the reconditioning of any type of existing industrial roof.

The MASTICON Process—developed and used exclusively by Industrial Engineering Ltd.—is recommended for the waterproofing of new roofs, as well as for prolonging the life of existing roofing. MASTICON treatment of roofing means a lasting job, defying the worst weather conditions, and unaffected by extremes of heat and cold.

Wherever your works is situated, Industrial Engineering Ltd., maintain a permanent staff of skilled labour in the district, fully qualified to undertake any roofing contract. Their district representative will be glad to carry out a survey of your roofs without charge, and submit a complete report, together with specifications and estimates for the work required.

ASBESTOS ROOFING

CORRUGATED IRON

GLAZED ROOFING

SLATE ROOFING

FELT ROOFING

CONCRETE & ASPHALTE

ZINC ROOFING

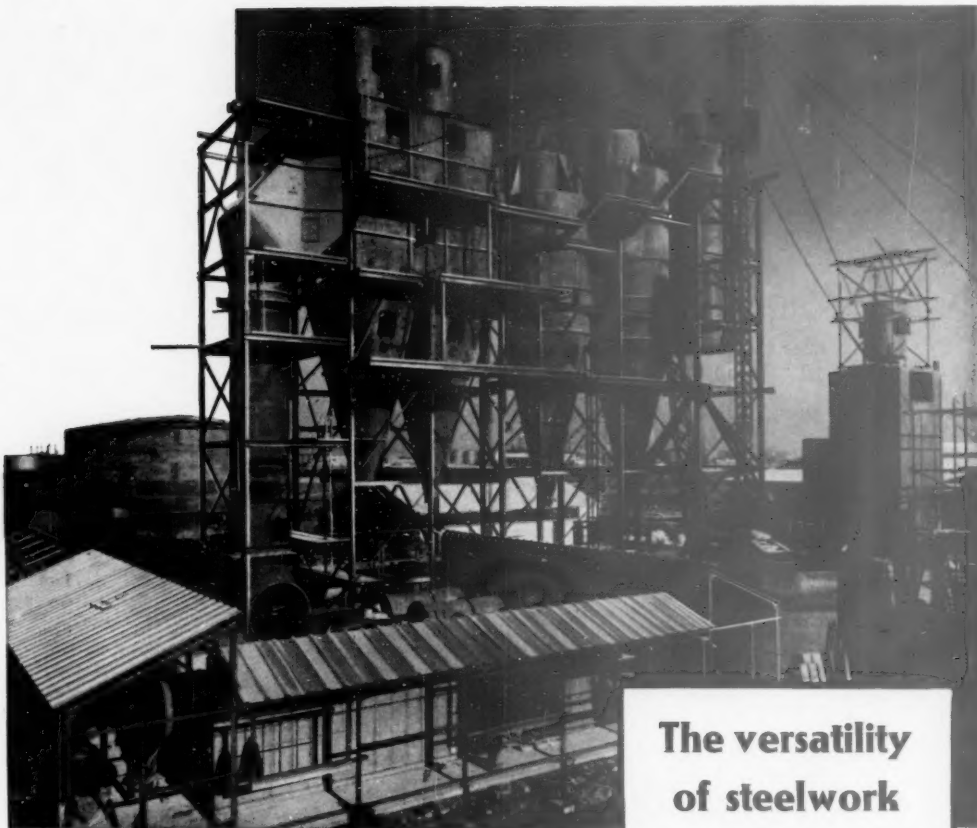


INDUSTRIAL ENGINEERING LTD.

One of the Associated Companies of Kelsey Industries Ltd.

MELLIER HOUSE, ALBEMARLE STREET, LONDON, W.1 • REGENT 1411

OFFICES & TECHNICAL STAFF AT BELFAST, BIRMINGHAM, BRISTOL, CARDIFF, DUBLIN, GLASGOW, LEEDS,
MANCHESTER, NEWCASTLE-ON-TYNE, SHEFFIELD, WOLVERHAMPTON



The versatility of steelwork

The highly developed technique of the industry is such that steel is readily fabricated into all manner of shapes that may be needed.

The upper illustration shows complex double-walled precipitators and cyclones for an important chemical firm: these incorporate internal mechanical equipment, and were welded from special corrosion-resisting plates needing special fabrication methods.

By way of contrast, the lower illustration shows the erection of one of the simple plate girders of a railway bridge, a typical example of the time-saving service afforded by structural steelwork.



BCSA

BRITISH CONSTRUCTIONAL
STEELWORK ASSOCIATION
ARTILLERY HOUSE, WESTMINSTER, S.W.1

STRUCTURE

STRUCTURE is an all embracing title. For the purpose of this report it is intended to cover, in a general way, those materials and methods which are used in producing the foundations and walls of buildings. In some cases—notably unit construction systems—the walls, roofs and floors cannot be considered separately. But the system of classification adopted in this report seems reasonably suitable as a method of grouping the innumerable products to be seen on different stands at the Building Exhibition.

In this first section Cement and Concrete can be justifiably included. Prestressed concrete and its application to building, though perhaps somewhat limited in its general use, is nevertheless attracting interest. This material is featured by the Cement Marketing Company, Limited (F. 127). An exhibition room forming part of the stand is suspended from pre-stressed beams and the floor of the room is designed so as to show the detailed construction which consists of Leca concrete slabs on pre-stressed concrete beams. The pre-stressed work was carried out by the Concrete Development Co., Ltd. The stand, illustrated in last week's issue, was designed by Kenneth Bayes, A.R.I.B.A., Design Research Unit. Messrs. Frederick Snow and Partners were the consulting engineers.

In connection with pre-stressing there is a system of forming ducts in concrete to take the reinforcement by using inflatable rubber tubing. This device, which is re-usable, is not confined to pre-stressing work. The tubes have recently been used to form ducts for electric wiring and experiments are being carried out on its application to drainage. Methods of using this structural aid are shown by the Ductube Company, Limited (M 258).

Mention of reinforcement in the preceding paragraph carries the mind to other structures in which reinforcement is used. Amongst these are the numerous barrel vaulted buildings, in this country and abroad, which require careful consideration of the design of the reinforcing steel if barrels are to be truly economical. "Twiststeel" Reinforcement, Ltd. (D 80), specialize in this kind of work and one of the exhibits on their stand will be a model of Barrel Vault Roofing on a factory. Reinforcing fabrics will be shown with illustrations of contracts constructed to the firm's design.

Visitors to the last Building Exhibition will not have forgotten the reinforced cantilever stand of the Lafarge Aluminous Cement Co., Ltd. This year the firm have a simple stand for disseminating information on particular uses of Ciment Fondu for rapid hardening of concrete and for making chemical-resistant concrete (D 78).

A number of precast concrete products will, of course, be shown. Among those making a first appearance at this exhibition is the "Benfix" prefabricated joist which can be seen on the stand of Johnsons R.C. Engineering Company, Ltd. (C 45). The joist, which is a combination of lattice-braced light steel work and timber fillets, is jig-made to a depth of 7 inches, and supplied to any specified length up to 26 feet. Floor boards are nailed to the timber fillets in the ordinary way, and the lattice-work obviates the need to cut or notch for services. Joists

are bitumastic-coated before delivery, and the makers state that they are light enough for one man alone to lift a 12-foot length into position.

A precast concrete chimney throat unit, designed to prevent down draught and to increase the efficiency of open fires, is an exhibit shown for the first time by B. Finch & Co., Ltd. (A11). The unit has an entry area of 100 sq ins tapering to an outlet of 40 sq ins. There is a horizontal smoke shelf at the back and sides of the top of the unit which can be used in new construction or built in to existing faulty flues.

One of the architect's chief problems today is to specify materials which will reduce maintenance costs without being themselves initially expensive. One example of how this can be done using precast concrete is the Finlock gutter. Moulded in waterproofed concrete these gutters are built up from 9in by 6in high blocks, each 22in in length. The blocks replace two courses of brickwork at eaves level. A further indication of their cost-saving propensities is the fact that a house has recently been built without external scaffolding. The gutters were laid from the inside and roofing work was carried out from the gutters. The firms stand (T 348) is in brick with gutter blocks in position. The lintel type of gutter will span entrances to the stand.

Of lightweight structural materials many come under different headings in this report. Here may be mentioned a display of solid clinker walling blocks which are shown by the Federation of Clinker Block Manufacturers (Gal. 413). The importance of correct manufacture of this type of block is stressed.

A new lightweight material is shown for the first time by Thermalite, Ltd. (S327). This is a structural material manufactured in 18in x 9in blocks and known as Thermalite. The rate of laying is said to be 22 per hour for 3in blocks, 20 per hour for 4in blocks. The blocks can be tooled and shaped and are also produced in a textured masonry finish.

A lightweight "cellular concrete" block can be seen on the Structural and

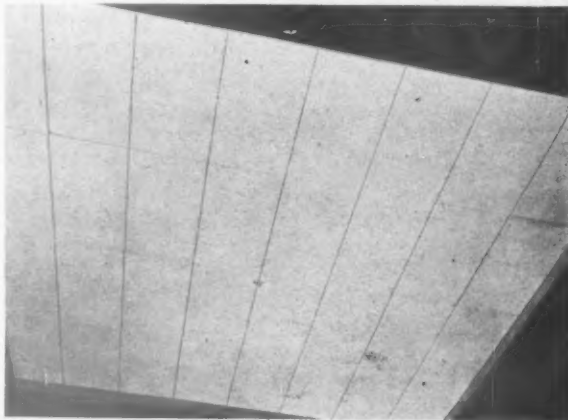


The Finlock gutter (see this page) is made up of waterproofed moulded precast units. The picture shows a typical eaves angle detail. Units to span windows and other openings will be seen on the firm's stand.

Mechanical Development Engineers' stand (Gal. 492). This is "Alcrete." Load bearing blocks and non-load bearing partition blocks are shown. Both types give a "K" value of 1.32 B.Th.U./ft² F/in.

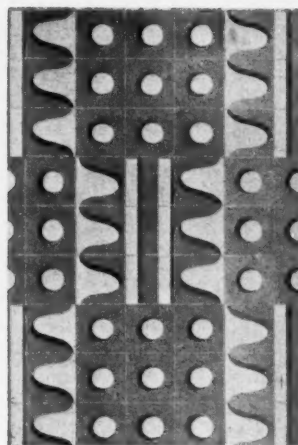
Many lightweight materials are used most satisfactorily in light framed buildings. In the latter category is the new Mark 1A form of permanent construction shown by Bristol Aeroplane Company (Housing), Ltd. (B. 27). This system is an improved and more economical version of the original school building system in aluminium.

Another example of light frame construction, in which the frame is designed to take modular building materials, is the Thermagard Mark III system, which is shown by Gardiner and Sons (D 89). In this case the infilling materials are Wood-wool roofing slabs by Thermacoust, Ltd., and ceilings by Meta Mica, Ltd. External wall cladding is at the architect's discretion.



Suspended ceiling panels, by Meta Mica Ltd. This firm, whose other products are described on another page, provide the ceiling panels for the Thermagard Mk. III system of construction referred to on this page.

BRICKS, TILES, ETC.



New tiles shown by Carters and designed by Peggy Angus.

CHOICE of brick can make or mar a design. And although everyone knows that selection of anything tends to become more difficult as the number of samples to choose from increases, there is much to be said for seeing and comparing many samples. On the stand of the National Federation of Clay Industries (D.88) over 100 brickmakers from different parts of the country are represented by separate panels. To enable visitors to select sources of supply the panels are keyed to a printed list giving names and addresses of manufacturers.

The Sand Lime Brick Manufacturers

Association, Ltd., exhibit (C57) contains some interesting and varied specimens of attractive bricks manufactured by its members. The main structure, built of pure white bricks, provides an excellent background for the coloured varieties and shows very clearly the clean-cut nature of those bricks. Their light-reflecting qualities are well displayed, as also is their use below damp-course level.

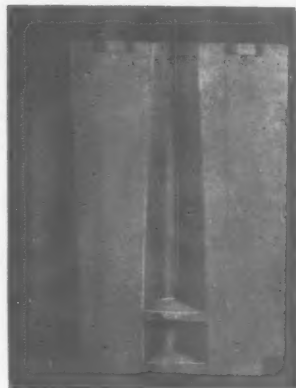
In a field such as this there can be few new products but, what with the 100 samples mentioned above and the exhibits of several other brick and tile firms, there should be no lack of choice. Among firms showing clay products are the London Brick Company (E97), Langley, London, Ltd. (F129), the South-Eastern Brick and Tile Federation (E92), the Accrington Brick Company (C65), the National Coal Board (D69) and Eastwoods, Ltd. (G151).

Roofing tiles should perhaps be under roofing, but many firms showing these also make bricks and quarry tiles. John Board and Co., Ltd. (H189) show a new bold roll pattern eaves tile, the underside of which is illustrated on this page. The special feature at the foot prevents birds entering through the space normally left by the roll. Hand-made tiles in a variety of shades and patterns are exhibited by Colthurst, Symons and Co., Ltd. (D84). The new pattern Yeoman tile, illustrated on this page, is on the Marley Tile Company's stand (H180). The Yeoman is a variable gauge Roman pattern without mitres at the corners. Floor tiles by this firm are referred to under flooring.

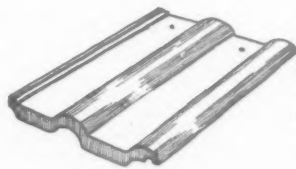
Roman interlocking tiles—a comparatively new addition to the range of the Redland Tile Company are shown on the roof of this firm's stand (E90).

Tiles for flat pitched roofs—i.e., 30 degrees—are one exhibit on the stand of Langley, London, Ltd. (F129).

Featured on the stand of the Carter Group of companies are special decorative tiles designed by Peggy Angus and hand-printed patterns. See picture top left.



Above: a new pattern eaves tile shown by John Board & Co. (H189), and, below, the Marley Tile Company's 'Yeoman' tile. See text this page.



PLASTER AND WALL BOARDS

THE range of wall boards of various types increases year by year. The advantages of "dry" wall and ceiling work for certain classes of building need no stressing, and some of the boards now being produced have excellent fair finishes which in certain cases need no treatment. Despite the present difficulties of getting good plasterers it is unlikely that wall-board facings will supplant plastering; indeed the marrying of the two techniques seems to be one way of getting the best of both worlds—a quickly fixed dry base and a smooth surface plaster skin. For such combined work Gypsum plaster comes to the fore. Care is needed in application however, and reliable firms are in a position to give advice on best methods of obtaining satisfactory results.

Cafferata & Co., Ltd. for instance have produced a booklet of specifications for one coat, two coat and three coat plaster work on plaster board as well as on brick, stone and tile. See their stand (N265).

Taking precedence amongst the exhibits on this stand is "Murite" Gypsum

Plaster; this is manufactured in five grades and is shown applied to the various surfaces likely to be found in modern building practice.

The Company's new works, situated close to their Hawton Quarries from which the Gypsum rock is obtained, are now in full production, to meet increased demands for new and improved plasters.

In the realm of wall boards themselves there are some interesting new developments. The Tentest Fibre Board Co., Ltd. (F 130) have produced and are showing "Rabbit Warren" S.C. Acoustic Board, a new sound absorbent material for which good performance is claimed. Other exhibits on this stand show methods of fixing insulating and other boards to steel-framed structures.

Fire-resisting wall boards, plaster boards and solid Zin plaster partitioning are incorporated in the construction of the British Plaster Board Ltd. stand (E 94). Here too, the design of the stand is such as to enable close inspection of the materials and construction methods. Samples of good and poor plastering sand

are available and simple methods of detecting poor sands are demonstrated.

In the chip-board range British Plimber Ltd. (H 177) have "Plimberite"—a board of pleasing finish in which the chips are bonded with synthetic resin under heat and pressure to a density of 50lb/cu ft. Standard sizes are 8ft x 4ft x either ½ in or ¾ in. This material can be cleanly worked with hand or machine tools. It may be sawn, drilled, moulded, planed and nailed or screwed on surface or edges without splitting. Normal painting can be done, or the surface may be wax polished. Given adequate edge support ½ in "Plimberite" can be used as flooring. B.R.S. have tested the material and made a report. The ¾ in board is suitable for flat roofing supported at 16in centres in a corresponding manner to suspended flooring. The boards should be covered with waterproof felting followed by asphalt or similar roofing material. With pitch roofs the spans can be increased slightly but care should be taken to assess the loading.

Another new board shown for the first time at the Building Exhibition is Asbes-

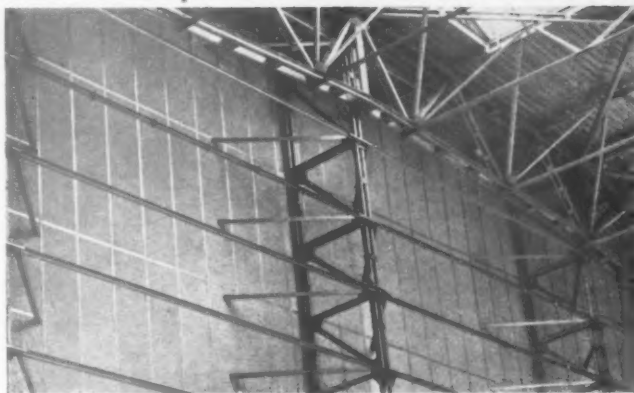
tolux by the Cape Asbestos Company Ltd. (Gal 426). This material is incombustible and has been used on the new aluminium-framed hangars at London Airport where the picture on this page was taken. "Pluto" board—an asbestos plastic weather-proof board—and other insulating and acoustic materials are also in evidence.

Strawboard, as used in the suspended offices at the Festival of Britain South Bank and as ceilings in the Bristol Aeroplane (Housing) Company's new aluminium-frame school building (see page 561), is exhibited by Stramit Boards, Ltd. (L 36). The uses of Stramit for partitioning and tank insulation will be described by the exhibit.

The latest product marketed in the Masonite, Ltd. (H 185), range of boards is enamelled Presdwood. This material is available from stock in white, cream and green. Sheets are in sizes 4ft x 6ft or 8ft.

Available in 4ft x 10ft sheets is Rockhammar, the company's thin insulating board which is white in colour and has a dimpled surface. Standard and tempered Presdwood—the latter for external use are also shown.

Acoustic tiles should, perhaps, be under a separate heading, but since they are intended for lining walls and ceilings the



"Asbestolux"—the new wall board produced by The Cape Asbestos Company Ltd., is shown here as walling to the aluminium hangars completed earlier this year at London Airport. See text under Wall boards.

new tiles shown by Meta Mica (Gal 452) are worth inspection by those who are

seeking insulation and wall treatment combined with good appearance.

METAL PRODUCTS

The metal shortage is serious. But this is no justification for the frequently expressed comment that metal is not available for building purposes. It is, provided that it is economically used. Initial cost admittedly tends to be high, but this factor must be balanced against the reductions in maintenance costs which can be achieved by the right use of metals and by the reduction in construction costs which can often be obtained by the use of light sheet in preference to heavier materials.

The Copper Development Association (Q 306) whose stand picture arrived too late for inclusion in last week's issue, have an exhibit designed by A. L. McMullen. Here advice on the availability and right uses of copper can be had from technical experts.

The Zinc Development Association (D 82) and the Lead Industries Development Council (H 188) are also sources of valuable information on what can and cannot be done to use metals.

Imperial Chemical Industries (D 86) are showing, in the Metals Division, various methods of fixing, jointing and making weatherings, etc., in aluminium and copper roofing. Long length copper tube for panel heating and for underground gas and water supplies is prominently featured. A new product of the Metals Division is the Kynal aluminium alloy tread plate for which excellent non-slip properties are claimed.

Copper and zinc roofing are shown by G. A. Harvey & Co., Ltd. (G 147), who also display a range of ornamental metalwork and perforated metal. The use of metal cable fixing trays is now an accepted method of fixing cables neatly to concrete and steel structures. Examples of such trays can be seen on the stand.

A new development which forms part of the structure of the Expanded Metal Company's stand (E 95) is flattened "Ex-pamet." This material has been used in this case as balustrade infilling.

Metal rainwater goods are shown by several firms. G. A. Harvey have put on the market mild steel goods manu-

factured to British Standard 1091—1946.

Light gauge metal, enamel coated in several colours by a special process which ensures complete internal and external coating of pipes, is a feature of the rainwater goods and soil pipes shown by Vitreflex, Ltd. (Q 313).

A pressed metal product which has attracted some attention is a floor joist

which can be seen incorporated in the stand of John Thompson (Beacon Windows), Ltd. (P 297).

Pressed steel stairs and metal partitions are two exhibits to be seen on the stand of Fredk. Braby & Co., Ltd. (K 228). Copper roofing is also shown with other metal products including cisterns, cylinders and tanks.



The Copper Development Association stand (Q 306) designed by A. L. McMullen, F.R.I.B.A.

FINISHES

UNDER this heading are numerous types of finish including paints and varnishes as well as renderings. In addition, preservatives and water-proofers have been included since the finish frequently depends upon correct treatment of the base.

News of new developments has, up to the time of going to press, been scarce. This is to be expected in a field where well-tried methods and materials are still applicable to traditional or new materials and to any period of design. Such new developments as there are seem to be confined to synthetic paint, renderings and the like.

For instance, Thomas Parsons & Sons, Ltd. (E 96) have never before shown "Parsymul" synthetic emulsion paint which is exhibited in flat, semi-gloss or eggshell finish. This paint is recommended for interior decoration where speed is essential and paint smell is undesirable. Covering capacity is said to be 90-125 sq yds per gallon. The paint can be brushed or sprayed.

New on the stand of Sealocrete Products, Ltd. (H 190) is Sealantex liquid stone compound, the company's latest product, which is for decorative finishes on cement, concrete, asbestos, etc., and can also be used under water. Seaiocrete liquid stain and coloured-cork flooring compound are also shown.

Bituminous paints and water-proofing

materials—by-products made by the National Coal Board (D 69)—are shown with wood preservatives.

Cement finishes for external work are shown by The Cement Marketing Company, Limited (F 127). In view of the filip given to the use of colour on the outside of buildings by the Festival of Britain the company's coloured renderings should attract even more than their usual notice. Demonstrations on how to obtain coloured finishes are carried out at regular intervals.

Synthetic Resin Emulsion paint has been used exclusively to decorate the stand of Vulcan Products, Ltd. (B 40). It is claimed as suitable for application on any material including new concrete, plaster, etc., and on highly alkaline surfaces such as those fire-proofed to conform with regulations.

Prevention of condensation is an attribute of the sprayed, self-coloured wall and ceiling finishes which are one of many exhibits on the Meta Mica stand (Gal 452). These finishes provide added thermal insulation and can be applied where trowelling is made difficult by site conditions; trowelled finishes based on the firm's aggregate are also shown.

In the realm of glazed coloured cement John Ellis & Sons, Ltd. (N 270) are showing a new product—Friesalux. This is in the form of decorative panels in sheets 8ft x 4ft. Black, white and five colours



are available. Special panels suitable for encasing baths are also available. The firm's Emalux glazed cement-wall finish which can where necessary be applied to glazed bricks and tiles is also shown.

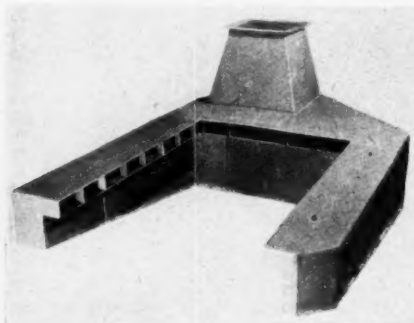
Though perhaps not strictly in the category of finishes, a new moulding material—used extensively in film set construction—and applicable to decoration in the building world is shown by Vinyl Products, Ltd. (S 329). The results achieved are shown in the accompanying illustration of a moulded capital.

VENTILATION

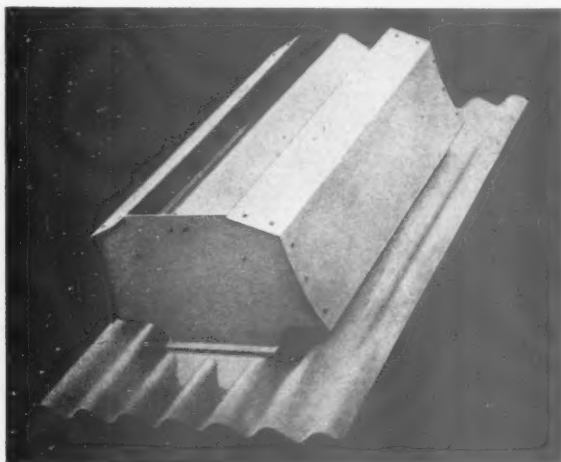
INDUSTRIAL ventilation is a principal feature of the Colt (Ventilation), Ltd., exhibit (K 231). Added to their range of thermostatically controlled ventilators, air tempering devices and fume extractors, there is this year shown for the first time

the A/SR Asbestos Extractor Ventilator, illustrated below right. This is designed to provide easy fixing on a base plate to suit various forms of roofing sheet. The main body is designed with the same aerofoil curves and has the same dimensions

and performance as the existing SR/2046 model but is seated on to a base plate which combines a soaker flange shaped to suit different corrugations or formations of roofing sheet. The unit can be dismantled for ease of delivery.



Above: typical fume ducting fabricated in P.V.C. materials about which further information may be obtained from Prodorite Ltd. (L 240).



Right: the Colt A/SR asbestos ventilator which may be dismantled for delivery, see text.

ALPHABETICAL KEY TO EXHIBITORS STANDS

The plan of the ground floor is on pages 566 and 567. The gallery plan is on page 568.

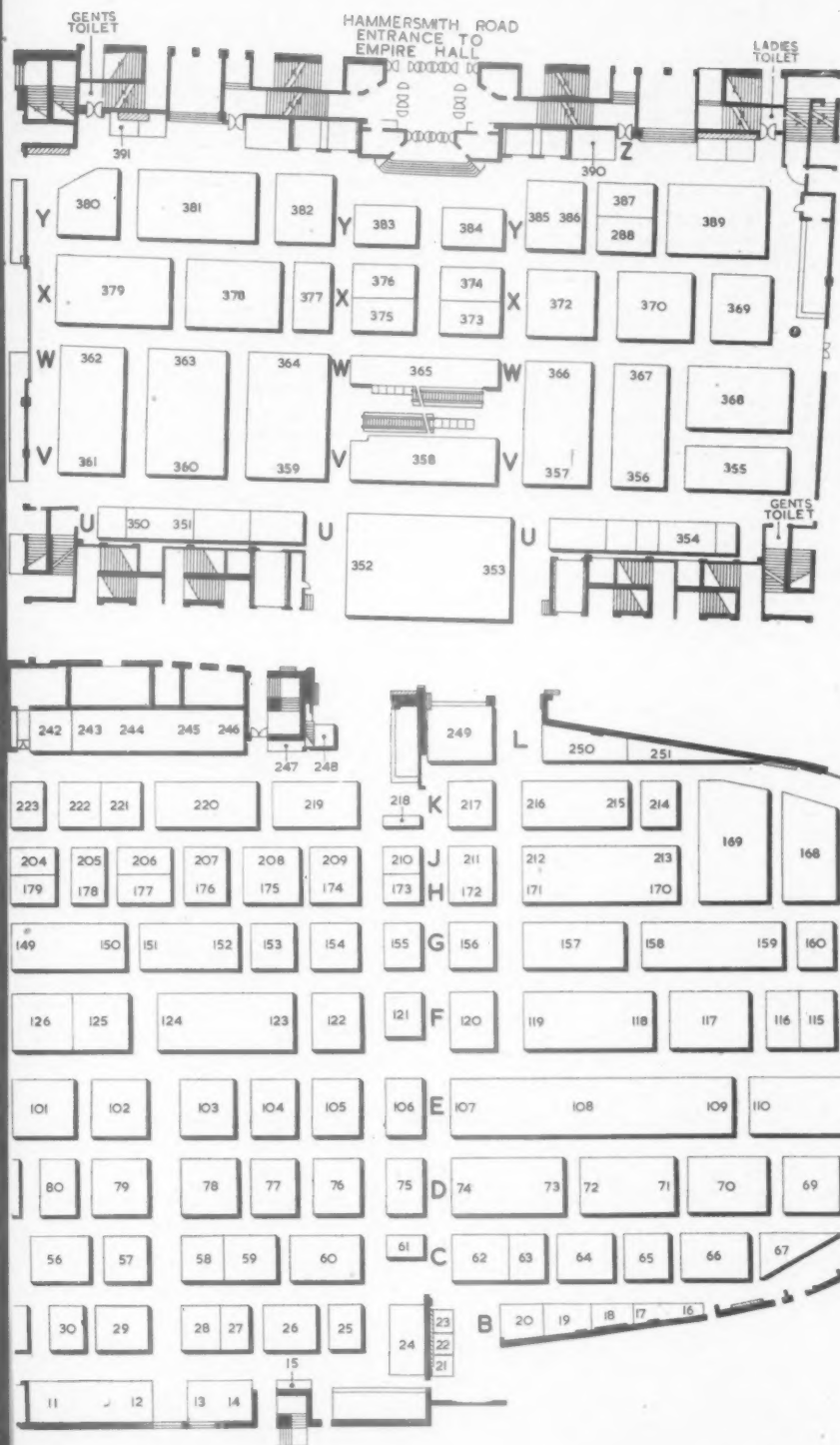
A	C	E	G	I	K	L	M	N	O	P	R	S	T	U	V	W	X	Y	Z																				
A.B.C.D. (Raynes Park)	N 275	Calfesta	N 265	Gardiner, Sons & Co.	D 89	MacAndrews & Forbes	S 333	Hesketh, Gordon	N 276	Labour News	A 15	Labour News	A 15	MacAndrews & Forbes	S 333	Nash, H. R.	R 317	Oliver Machinery	O 285	Palmer's Travelling Cradle	H 172	Randall, Wm. & Co.	F 115	Sagar Developments	X 377	Taylor, J. & Co.	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Abraham, Robert	N 275	Callow & Keppich	N 265	Gilks & Son	D 89	McLean (Metal Windows)	S 333	Heyman, B.	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	National Coal Board	R 317	Oliver, Wm. & Sons	O 285	Parker, Fred L.	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Accrington Brick	N 275	Candy & Co.	N 265	Goodenough Contractors	D 89	Marbolic Plg. Co.	S 333	Hickson's Timber Impregnation	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	N.F.B.T.E.	R 317	Oman, William	O 285	Peck, J. & Sons	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
A.C.E. Machinery	N 275	Cape Asbestos	N 265	Goodlass, Wall & Co.	D 89	Masonite	S 333	Hilmer	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	Nat. Fed. Clay Ind.	R 317			Peerless Built-in Furniture	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Acrow (Engineers)	N 275	Carter Group	N 265	Granger, Samuel	D 89	Midland Bank	S 333	H.M.S.O.	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	Nat. Plywood Corp.	R 317			Peglers	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Adam & Harvey	N 275	Carrut	N 265	Gulf Radiators	D 89	Midland Saw & Tool Co.	S 333	Holloway Metal Roofs	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	New Era Publishing	R 317			Pensons	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Adhead Ratcliffe & Co.	N 275	Caslon Publishing	N 265	Gypsum Mines	D 89	Mills Scaffold Co.	S 333	Hope, Henry & Sons	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	New Floor Installations	R 317			Pentford Fencing	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Aga Hest	N 275	Cement & Concrete Assn.	N 265	Hadfields (Merton)	D 89	Ministry of Fuel & Power	S 333	Housing Engineers	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	Noelita	R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Aidas Electric	N 275	Chadwick & Shapcott	N 265	Halling	D 89	Ministry of Local Government	S 333	Housing Centre	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333	Nuffor	R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Aircrew & Jicwood	N 275	Chubb, Lock & Safe Co.	N 265	Harris Engineering	D 89	Ministry of Works	S 333	Hydro-Thermal	N 276	Langley London	D 129	Langley London	D 129	M.E. Engineering	S 333		R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Alabastine	N 275				D 89		S 333		N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Albion Iron	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Alham, E. P.	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Alham Machinery Hire	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Alham Road Plant	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Allen Oil Equip.	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Almin	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Anderson, C. F. & Son	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Anderson Const. Co.	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Anderson, D. & Son	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Anselm Odling	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Apprentice Training	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
A.B.S.	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
ARCHITECT & BUILDING NEWS	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Architects Classify	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Architectural Drawings	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Armstrong Cork	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Arpic Engineering	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Art Pavement & Dec.	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Ascor Water Heaters	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Asotat	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Atomic Draught-Sealing	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. & Co.	Z 364
Aubanel, John	N 275				D 89				N 276					S 333			R 317			Phelps	H 172	Ransome & Rapier	F 115	Sand Lime Brick Manuf.	X 377	Shankley, Joseph	T 344	Uggle, J. & Co.	U 377	V. J. & Co.	V 364	W. J. & Co.	W 364	X. J. & Co.	X 377	Y. J. & Co.	Y 364	Z. J. &ieri	

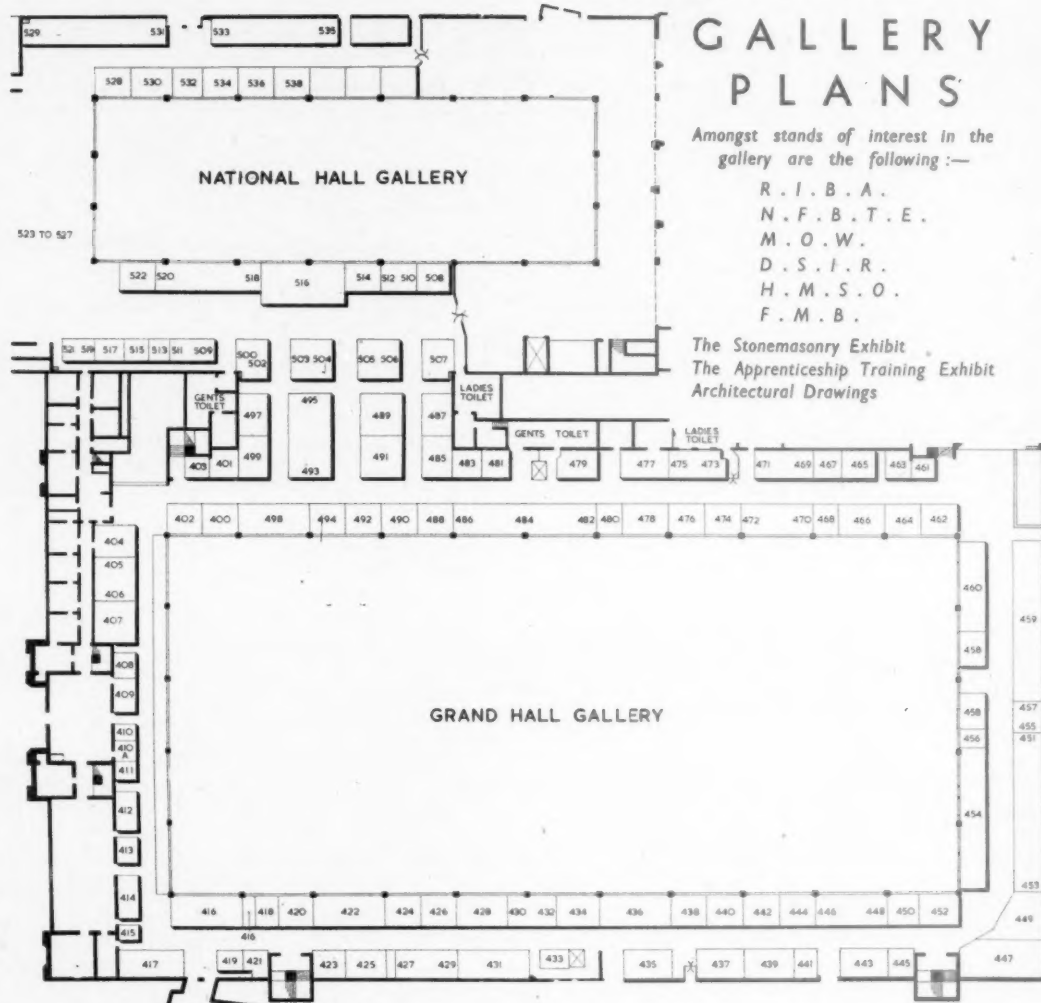


GROUND FLOOR PLAN

For key
see page 565

For gallery
plan see
page 568





GALLERY PLANS

Amongst stands of interest in the gallery are the following:—

R. I. B. A.
N. F. B. T. E.
M. O. W.
D. S. I. R.
H. M. S. O.
F. M. B.

The Stonemasonry Exhibit
The Apprenticeship Training Exhibit
Architectural Drawings

ALPHABETICAL LIST CONTINUED FROM PAGE 565

Stephenson Developments S 339
Sterling Foundry Specialities C 67
Stevenson, John Y 385
Stewarts & Lloyds N 272
Stone Masonry Exhibit Gal 523
Stopper Manufacturing Gal 407
Stothers & Pitt O 286
Stramit Boards L 236
Stroud Bros. B 12
Structural & Mechanical Eng. Gal 492
Stykes (Contractors) C 58
Sussex & Dorking Brick F 132

T
Tells B 23
Templer C. G. H 179
Tentest Fibre Board F 130
Thermalite S 327
Thompson, J. (Beacon Windows) P 297
Thwaites Agricultural Engineering Gal 478

T.D.A.
Timber & Plywood
Tretol
Trianco
True Crete
True Flue
Tubewrights
Tucker, G.
Turner, Charles & Son
Turz Tractors
Twiststeel Reinforcement
Tyrol Sales
Tyzack & Son

U
Union Glue & Gelatine
Unique Balance
Units Construction
United Sponge Co.
Ure, Allan

P 298
A 2
K 229
O 289
A 10
N 272
N 272
F 283
F 116
D 80
E 106
Gal 431

B 37
Gal 505
C 66
Gal 421
L 246

V
Victory Valves
Vigers, A.
Village Workshop
Vinyl Products
Vitreflex
Volspray
Vulcan Manufacturing
Vulcan Products

W
Wadkin
Wallis & Co. (Long Eaton)
Ward, Thos. W.
Ward's Flexible Rod Co.
Warerite
Warry Building Equipment
Warsop Power Tools
Watherill, F. E.
White, Thomas & Son

Gal 437
H 182
L 249
S 329
Q 313
Gal 485
Gal 500
B 40

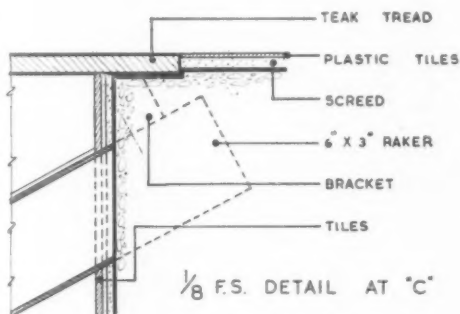
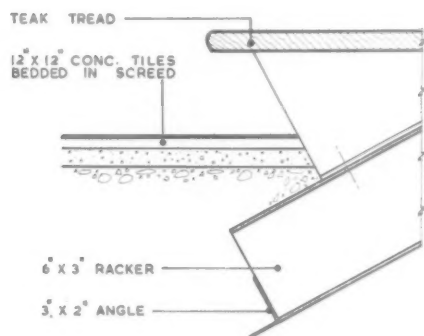
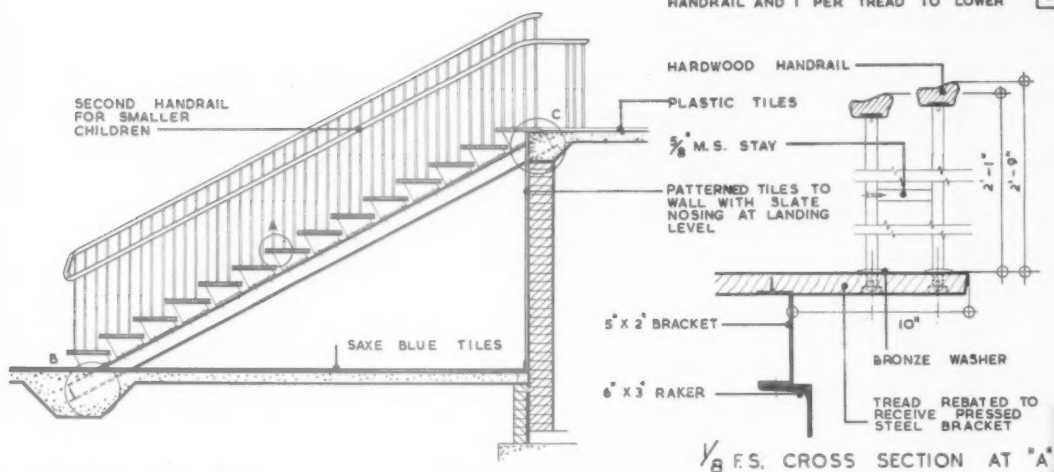
Y
Yorkshire Copper Works
Youngman, W. C.
Z
Zinc Alloy Rust-proofing
Zinc Development Assn.

Gal 517
Gal 477
G 158
X 376
Gal 530
D 83
X 369
Z 391
Gal 467
Gal 528

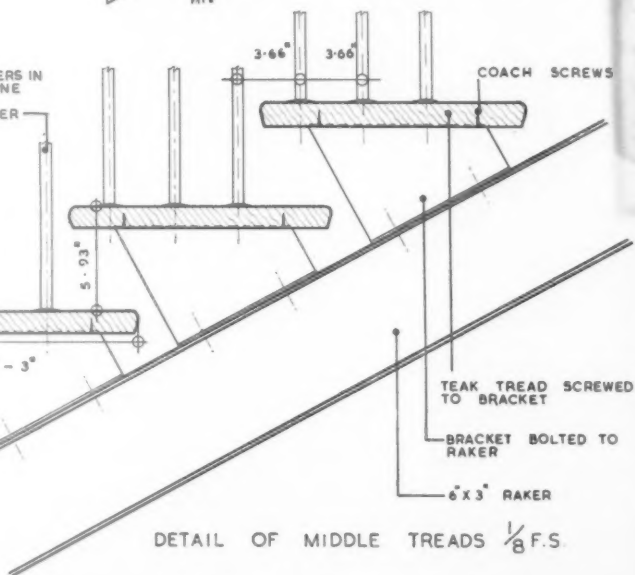
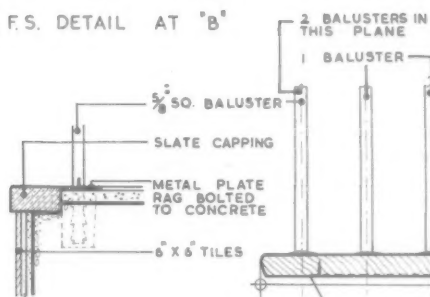
G 143
K 218

T 341
D 82

3 BALUSTERS PER TREAD TO HIGHER
HANDRAIL AND 1 PER TREAD TO LOWER

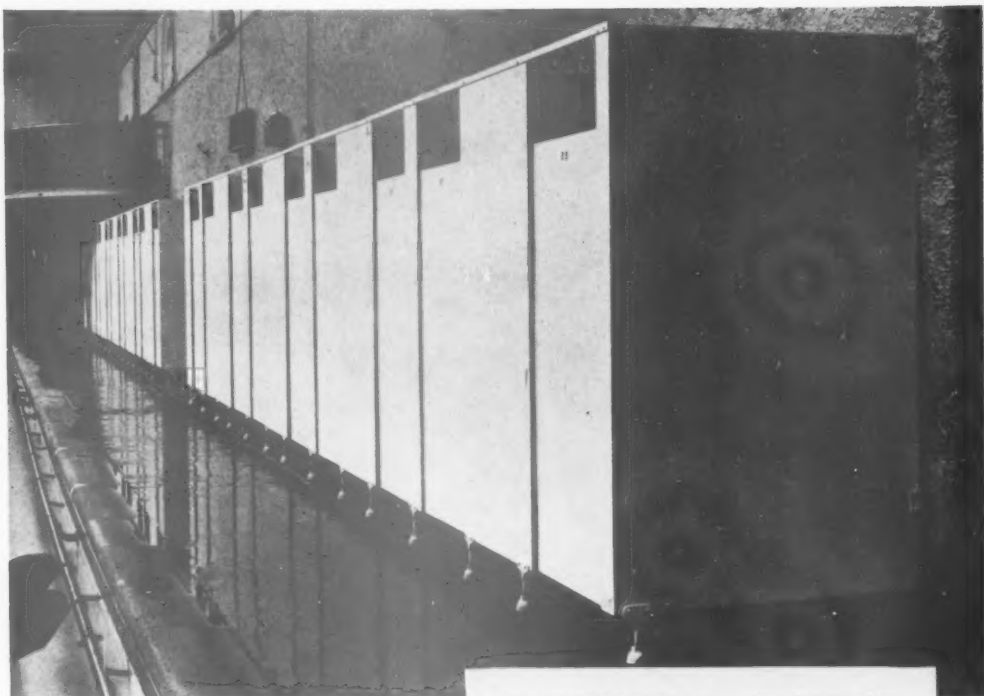


1/8 F.S. DETAIL AT "B"

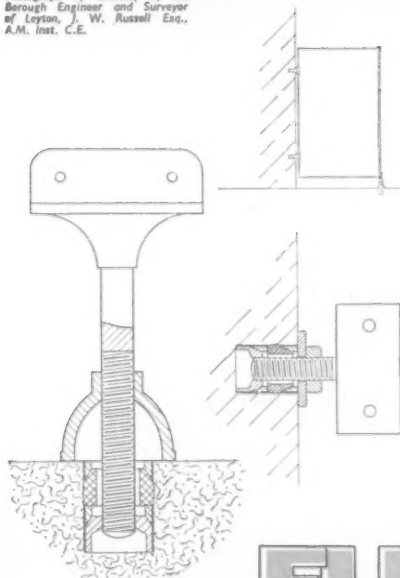




ENTRANCE HALL STAIRCASE,
JUNIOR SCHOOL, HEMEL HEMPSTEAD
ARCHITECTS: HARRISON & SEEL



Photograph by courtesy of the
Borough Engineer and Surveyor
of Leyton, J. W. Russell Esq.,
A.M. Inst. C.E.



FLEXOMETAL CUBICLES

As is well known, Flexometal cubicles are hygienic and light, they save a lot of space owing to being thin, yet rigid.

This installation is at the Cathall Road Baths, Leyton, and is of particular interest because the cubicles are demountable by undoing the special "Cinch bolt" shown.

FLEXO PLYWOOD INDUSTRIES LTD.
SOUTH CHINGFORD, LONDON, E.4
Telephone: Silverthorn 2666 (7 lines)
(Associated with Cork Manufacturing Co. Ltd.)

FLEXOMETAL

Downe Manor Primary School, Ealing, Middlesex
 Architect: C. G. Stillman, F.R.I.B.A.,
 County Architect, Middlesex County Council



*School Building
 Programme = SBP
 —
 SBP + Good Roofing
 + skilled fixers
 = Roofing by
RUBEROID*

See the Ruberoid Stand No. 307,
 Row Q, at the Building Exhibition.

The Specification of the Ruberoid System of Roofing for much of the School Building Programme testifies not only to the dependability of Ruberoid and its low cost per year of service but also to the speed with which the work can be executed.

There are suitable weatherproofing specifications to meet the requirements of all types of Industrial, Educational and Private buildings with flat, pitched or curved roofs.

Architects and Engineers are invited to write for the technical brochures which describe these specifications in detail.

THE RUBEROID COMPANY LIMITED, 93, COMMONWEALTH HOUSE, NEW OXFORD STREET, LONDON, W.C.1

Branches: Manchester, Newcastle-on-Tyne, Birmingham, Glasgow, Edinburgh, Aberdeen, Belfast

TIMBER

THE Timber Development stand (P 298) is a striking example of what can be done with new timber techniques both in construction and design. This stand has been designed to illustrate to architects, engineers and builders, and others interested in building, ways in which softwoods, hardwoods and plywood can, by the application of new constructional design and technique, assist them in their constructional problems.

The stand itself expresses an entirely new design in timber construction, consisting as it does of a stressed plywood roof of high strength to weight ratio. The roof is supported upon framed timber clad in sycamore veneered plywood, and the manner in which this has been achieved represents new ideas in the constructional and decorative use of timber.

A comprehensive range of materials, including samples chosen from selected seasoned hardwoods and interesting

examples of advanced technique in plywood manufacture will be shown by William Mallinson & Sons, Ltd. (E 100). The stand is in two sections, one of which takes the form of a semi-enclosed office section veneered in figured white sycamore framed in solid Obachi. In the window opening of this are many examples of solid timbers from all parts of the world. On the enclosed end is a screen formed by panels of Armourply in copper and monel metal arranged in chequered pattern, for the inner surface of which, galvanized steel is used.

The other section of the stand shows a plywood canopy curved in a corrugated form below which are shown 28 examples of finely figured woods.

A comprehensive display of veneers suitable to the building industry is shown by John Wright (Veneers), Ltd. (Gal 528). The veneers shown are British cut on the latest machinery. Woods are selected by

the technical staff of the firm, which has specialized in this highly skilled process since 1866.

The new "Ejma" standard wood casement window is one of the principal exhibits on the English Joinery Manufacturers' Association's stand (G 139). A 2 on display will be examples of "Ejma" standard kitchen units of which there are 20 different types.

On the stand of J. Gliksten & Son, Ltd. (G 141), all companies of the Gliksten Organization are represented. There is a comprehensive selection of hardwood panels including a display of British Honduras and West African timbers.

Gliksten Doors, Limited, show hard-board-faced and plywood-faced flush doors, and The National Plywood Corporation, Ltd., have a display of home-produced and imported plywoods. Merediths, Limited, are showing a selection of softwoods.

WINDOWS, SHUTTERS, ETC.

UNDER this heading there are several developments of interest to be seen. On Williams & Williams, Ltd., stand (D 83) there is the new teleflex midge window gear. This gear is intended primarily for operating single opening lights out of reach of normal hand operation. Combinations of opening lights can, however, be controlled by one operator. On the stand is a "Midge" gear box operating a small domestic-type window—a top hung vent—on the first floor of the stand. Other exhibits include a standard steel domestic-type window fitted with copper doors and nylon flyscreens, with side hung vents opening outwards and controlled by means of "Roto" through-screen operators fixed at the sill. These two examples by no means cover the numerous other items shown by this firm.

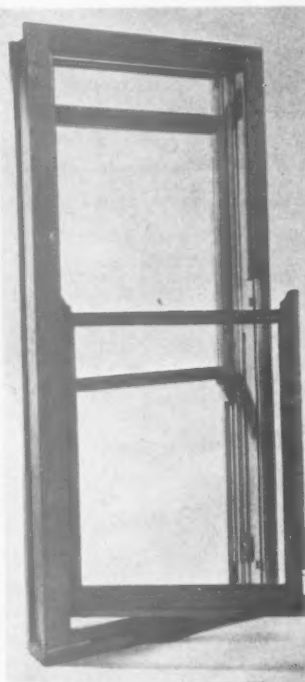
On another stand is a double-hung window in which the sash can be swung inwards for ease of cleaning. The window shown by the Unique Balance Co., Ltd. (Gal 505) is illustrated on this page. The design of this window has been evolved in conjunction with the British Standards Institution. To swing the sash inwards the window must be raised from the closed position. Slotted hinges positioned on the left-hand bead are swung into position to engage with screwed spigots on the sash when the sash is again lowered to a position just clear of the bottom sill bead. A section of the bead or batten rod on the right-hand side is made movable by means of hinges and a quick-release screw. With the lower sash engaged to the slotted hinges, and the batten rod hinged away, the complete lower sash can be opened inwards, the special Unique "Swing-in" sash fittings automatically disconnecting the right-hand Unique Balance from the sash and locking this in a fixed position until re-engagement by closure of the sash.

New, too, and shown by Sharp Bros. & Knight, Ltd. (P 292) is the "Minicost" window (patent pending). In this window vertically sliding sashes pivot inwards, providing wide access for furniture. The firm's stormproof windows, E.J.M.A. kitchen cabinets and internal and external flush doors are also shown.

Sidewall glazing is a feature of Henry Hopes stand (D 90). The example consists of vertical patent glazing built in the way in which it is applied to a steel-framed building. An electrically con-

trolled continuous opening light, a large swinging ventilator fitted with hand-operated telescopic strut and large top hung ventilator, hand operated by twin screw gear is incorporated in the glazing. School windows are shown in a wall parallel to the vertical glazed screen.

Metal windows for hot countries are



The Unique Balance Company's new window which has sliding sashes, the lower of which swings inwards as described on this page.

among the numerous exhibits on the stand of the Crittall Manufacturing Company, Limited (E 98). The stand designed by Group E—four students of the architectural association—is illustrated on page 570. The windows referred to are designed to provide maximum ventilation, security and exclusion of direct sunlight. There is also a sample set of movable sunbreakers for large openings in cast and sheet aluminium. Also shown are pressed steel shutters with louvres pressed in the sheet. Amongst the door exhibits is a special sliding folding door.

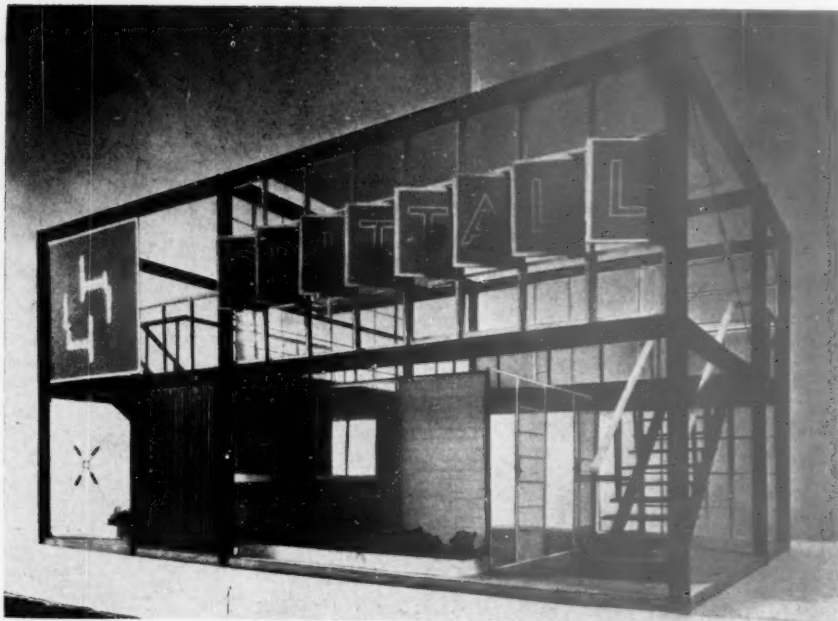
Another stand of interest both from the design and information angle is that of McClean & Company (Metal Windows), Ltd. The stand, illustrated in last week's *Architect & Building News*, incorporates one of the stairs to the gallery. On the stand information will be given about the firm's new rustproofing plant believed to be the largest in the country which provides a rustproof, ready-to-finish surface by continuous electrogalvanizing.

Finally, in the window section is yet another new window developed by John Thompson (Beacon Windows), Ltd. (P 297). Weather-proofness is the keynote of this design, whether the window is open or shut. The open window is demonstrated with a draught and spray device to demonstrate the company's claims.

For openings other than for windows and with particular stress on large openings such as are necessary in industrial premises one essential is that heat losses through such gaps should be reduced to a minimum. Heat losses through doorways and gateways which are left standing open after use can be an expensive item. The natural user resistance to doors which require exertion to close is understandable. The designer can do much to overcome such resistance by incorporating easily sliding doors which have the advantage of saving space.

Sliding and folding gates of many kinds are to be seen on the Bolton Gate Company's stand (H 183). Amongst them are doors operated by photo-electric cell, a device which satisfactorily baffles even those who were, proverbially, born in a field.

Esavian (K 225) are showing two of their numerous slide and fold units; one is an interior screen to fold into a cupboard recess, the other is a window for hospitals and schools.



A model of the stand designed for the Crittall Manufacturing Company Limited by Group E—four students of the Architectural Association. Windows for hot climates are one feature of this exhibit as described on page 569.

FLOORING

THE number of different types of floor make it impossible to give complete coverage. The following notes pinpoint some new developments.

For granolithic floors a new type of reinforcing mesh has been produced by Prodorite, Ltd. (L240) this is illustrated in the accompanying picture below.

New products in the range of floor tiles produced by the Marley Tile Co., Ltd. (H180) include plain and coved base skirting both of which eliminate the use of timber. Marley plastic edging strip for finishing off at the edge of tiling and jointless flooring is also new. This firm produces special tiles for specific flooring needs such as semi-flexible tiles for laying on timber floors.

Semtex, Ltd. (E101) are showing special plastic tiles, displayed for the first time at a trade exhibition. These tiles have been designed to meet the demand for a superior finish at reasonable cost. Sematic decorative tiles and Fleximer floor are incorporated in the flooring of the stand. From July 1, 1951, a complete flooring and maintenance service of Dunlop floors has been available through all Semtex branches.

Emphasis on the Limmer and Trinidad Lake Asphalt Company's stand (F125) is concentrated this year on showing the wide range of floorings which can now be supplied and laid by the company and its associates. Shown for the first time is a new high-grade linoleum in varying thicknesses and colours. "Trinascolin" by name, this linoleum is laid in squares or sheet form wherever a luxury-grade floor is needed for warmth and decorative

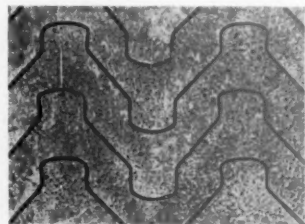
effect. Acid and oil-resistant floors will be shown as well.

Rubber floorings, tiles, covings, etc., are shown by the British Rubber Development Board, a non-trading, non-manufacturing organization on stand (B34). Rubber as wall panels for escalators is shown.

Many of the flooring materials shown have been subjected to testing at the Building Research Station. Among those which have been subjected to such tests is "Acotile." This is composed of asphalt fibre, mineral pigment and resinous binder and can be seen on the Armstrong Cork Company's stand (C46) together with the firm's cork tile.

Marble and terrazzo floors are incorporated in the stand of the Carter Group (D85).

On the stand of Langley, London, Ltd.



Detail showing the granolithic reinforcement developed, and shown for the first time at the Building Exhibition by Prodorite Ltd. L 240

(F129), Langboro floor and cill tiles, in a range of nine colours which have proved popular for housing, can be seen with quarry tiles and shaped tiles.

Shown for the first time by Burtain, Limited (Gal. 402) is a new prefabricated parquet, known as Paragon. This floor is laid in sections 2ft x 2ft square; it is of oak $\frac{1}{8}$ in in thickness which requires no licence. Price is from 26s per sq. yd.

Colour in flooring is demonstrated by the Avon India Rubber Co., Ltd. (C54) who have a contracting service for the laying of their rubber floors.

Industrial floors of many kinds are shown with decorative floors by E. J. Elgood, Ltd. (B35). For dustproofing of concrete floors this firm market a fluid glass sealer which is acid and alkaline resistant. Composition flooring of latex-cork composition for use in public buildings where heat insulation and hard wearing quality is required can be seen on the stand of Rubbalux Company (Gal. 418). Floor tiles of rubber, and compressed cork flooring—the latter supplied and laid by Edward Stuart & Co., a subsidiary firm—are also exhibited.

Plastic flooring is on the floor of John Kent's stand (H168). Another of this firm's specialties is "Linsitu"—a cement-bitumen floor produced in domestic and industrial grades.

Not connected with flooring but showing on the same stand as John Kent are Reparatons-Dreyfus, Ltd. (H168). An interesting exhibit for builders and architects on this stand is the specimen of repaired stonework which shows how not to do it. The firm's methods of repairing different kinds of stone are demonstrated.

ROOFING

NEW in timber roof design is the roof of the Timber Development Association stand (F298). The roof is of stressed plywood of high strength-to-weight ratio, the general design was illustrated in last week's *Architect and Building News*.

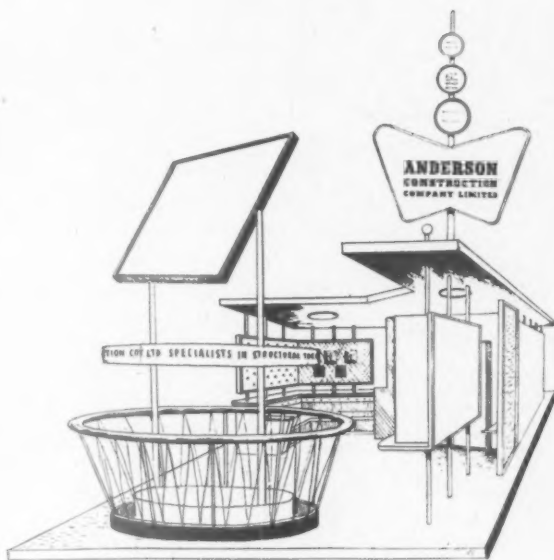
Steel deck flooring with wood wool slab infilling is shown by The Ruberoid Company, Ltd. (Q307). This floor is incorporated in the upper level of the stand so that close inspection of both top and under surfaces is possible.

"Thermolith" is a new roofing system shown by D. Anderson and Son, Ltd. (F126). This roof will span up to 15 feet between supports and combines insulating slabs with bar section and waterproofing to provide a firm rigid deck. Also shown here amongst many other roofing materials is "Thermoglas" roofing—a glass base roofing felt.

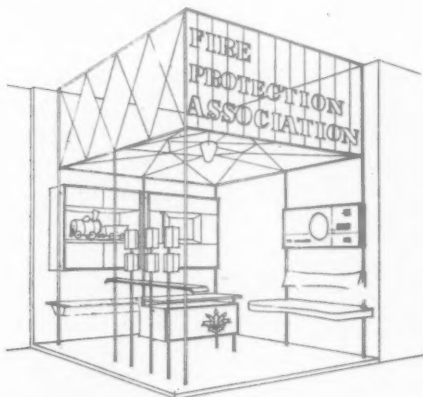
Colour—particularly on low, flat roofs which are overlooked by other buildings—is an important factor in specifying roofing. Red, green, grey and white mineral roofings are to be found on William Briggs & Sons, Limited stand (B32). Full scale sections show roofs applied to concrete and timber decks. The giant roof of the Abbey Steel Works at Margam in South Wales, recently illustrated in these pages, was carried out in this firm's "Bitumetal" roofing. Briggs "Aqualite" bitumen sheeting was used on the Royal Festival Hall.

In an allied category to roofing is roof lighting. Imperial Chemical Industries (Plastics Division) (D86) are giving emphasis to the use of corrugated Perspex for lighting industrial and commercial buildings.

The stand illustrated top right is that of the Anderson Construction Co., Ltd. (R319), designed by F. W. H. Ransome Smith, M.S.I.A. On it will be found a



The Anderson Construction Company's stand designed by F. W. H. Ransome Smith, M.S.I.A. See text.



The stand of the Fire Protection Association (Gal 411) is a reception centre for architects and builders who are interested in Fire Protection. Advice is given free on request.

feature with a revolving ceiling showing the firm's wedge method of fixing. Other exhibits show secret fixing for ceilings.

New roof light construction shown for the first time by J. A. King & Co., Ltd. (F 131) is described under glazing. In addition, this firm are showing precast concrete units for shell roofs.

For the first time for a long time Cedar roofing shingles can be obtained again since they have been freed from licence. W. H. Colt (London), Ltd. (K 231) are showing their Canadian shingles which can now be supplied from stock.

The official $\frac{1}{12}$ in scale model of the roof of the Royal Festival Hall is shown by Holloway Metal Roofs, Limited (Gal 466).

This firm who supplied and fixed the copper roofing to the Hall have also fixed it to the model. Zinc roofing will also be shown using traditional gauges.

Insulation for roofs and roof spaces can be found in two forms on the stand of Meta Mica, Ltd. (Gal 452) where insulating roof screed for new or existing buildings is shown together with loosefill for attics. Loosefill is probably the easiest and cheapest way for householders to provide thermal insulation in their own roof spaces, an area which can be responsible for considerable heat loss.

HEATING

EFFICIENCY and economy will be the two features most looked for by visitors in search of heating devices. There is no dearth of interest on the stands showing heating apparatus and several new developments are to be seen.

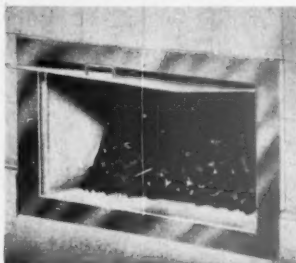
The free standing stove, of which there are now many models, is gaining in popularity. The former objection to this type of heating, on the grounds of its appearance, have been largely overcome by good design and by the fact that this kind of stove is claimed to be the most efficient solid fuel appliance for heating a single room. The Coal Utilization Joint Council (M254) are showing a model—burning—and for those who do not like to see a stove standing by itself, the Council have included an inset stove in a suitable surround. In addition this stand features a whole house heating unit, comprising down draught furnace, air heater and hot water cylinder, built into an insulated cabinet. Convective type fires and solid fuel heating, together with sixteen different types of suitable fuel, are also shown.

The Gas Council Stand (P299) features appliances suitable for all types of houses, flats, schools, hospitals and other public buildings, and includes panels illustrative of central heating and hot-water installations, showing the provision it is necessary to make for these connections at the planning and drawing-board stage. In addition, advisers will be present on the stand who, as the Gas Industry's representatives, responsible for arranging gas supplies to new towns and new housing estates, have all the special knowledge which visitors to the exhibition will require.

The exhibit includes:—(1) Two sections showing the installation of gas and coke appliances in low-cost housing estates. (2) Two sections which show the installation of gas and coke appliances in larger houses.

In all the above cases, the exhibit includes appliances for cooking, space heating, home laundry, water heating, etc.

(3) A section showing a method by which gas fires can be installed in the



Above: the new Logical fuel bunker with external hopper and internal access door, shown by the Stopper Manufacturing Company.

large blocks of flats, depicting the construction of multiple-flue ducts; each gas fire is separately flued, and extending the full height of the building. (4) A section showing typical heating, catering and water-heating appliances for installation in schools. (5) A section showing hospital equipment for sterilizing, central heating, cooking and water heating, including a storage water heater, specially suitable for

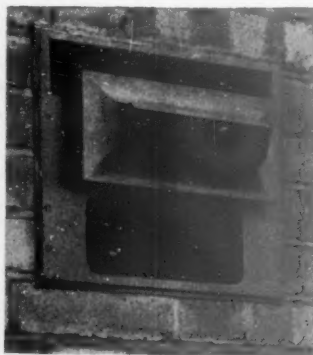
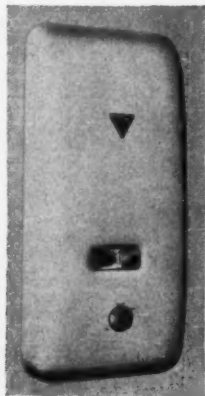
first-aid rooms, which can immediately provide up to four gallons of boiling water. (6) A balanced flue appliance display, featuring a Cowper Penfold "Sapphire" space heater and the Ascot "715" multipoint gas water heater, mentioned below. (7) A special display of the heating and catering installations at the Royal Festival Hall, which are entirely served by gas. (8) A special display showing how the British Standards and Codes of Practice apply to the installation of gas appliances for water heating.

The storage of fuel still constitutes a problem in many homes. Outside sheds frequently involve trekking dirt through the house and in some cases involve the man of the house in a thorough soaking when asked to get a scuttle full just as he has settled down to the evening paper. A bunker is shown by the Stopper Manufacturing Company, Ltd. (Gal. 407) which is fed from outside with a delivery door inside. The floor of the bunker is sloped back from the delivery door so that risk of fuel falling out into the room is minimized.

New open fires designed to British Standard dimensions are shown by the Solid Smokeless Fuels Federation (K220). Shown for the first time by Allan Ure, Limited (L246) is the "URE" continuous burning back-back-grate.

Recent additions to the range of boilers produced by Janitor Boilers, Limited (L243) are three models of automatic thermostatically controlled gravity fed coke-burning boilers: respective capacities are 60,000; 90,000 and 140,000.

A gas water-heating unit which should attract considerable interest is the Balanced Flue heater which makes its first public appearance on the stand of Ascot Gas Water Heaters, Limited (N269). This heater is fundamentally different from any previous design of gas water-heater. The combustion chamber and flue is completely sealed off from the room in which the heater is installed. Downdraughts into the room with consequent vitiation of the air are impossible. The air required to burn the gas is drawn from outside the building and discharged externally: both



The new Ascot "715" balanced flue heater. Left, above, the internal appearance. The heater projects 5 inches. Centre, the patent combined intake and flue terminal. Right, with the casing removed showing the wall recess.



Above: a new insulating jacket for cylinders, and top, centre, a new hanging heater. Both are by Hursel Ltd. The hanging heater consists of a fan inside high-grade, sheet metal casing, with a louvred front, controlling the air stream. The fan can also be used separately for ventilation. This heater is recommended for buildings where floor space is limited.



intake and extract being effected through a specially designed flue terminal. On the inside wall the heater projects only 5in. Our illustration shows the heater and the vent head but the working models on the stand should be seen.

The Electrical Development Association (E103) are showing a combined solid-fuel electric water heating system to emphasize the importance of correct pipe layout in preventing waste of electricity. Comparative unit loss figures will be given for average and good insulation.

A large part of the stand is devoted to a full-scale section representing that portion of a two-storey house concerned with the plumbing. It will include part of the hall and sitting room, and an almost complete kitchen, with the ceiling cut away to reveal the pipe runs to the bathroom above.

The remainder of the stand will consist of a two-storey house, half actual size, built in skeleton form, with full-size electrical equipment identified and explained by printed display cards. The complete house-wiring scheme will include cabling for an electric cooker and water heater, and lighting circuit and ring main wiring to an adequate number of 13-ampere fused plugs and sockets.

In relation to the need for insulation it is worth noting that a new heater and cylinder insulation jacket is shown by Hursel, Ltd. (Gal. 439), see accompanying illustration. This firm are also showing hot water radiators which can be "tailored" to any shape or size to fit curves and angles, as well as a new hanging electric heater. Associated with the company are Gulf Radiators, Ltd., who show their range of oil-filled radiators—a method of heating which has much to commend it both from the safety and economy angles.

A new water radiator and two models of oil-filled radiators with thermostatic control can be seen on the stand of Dimplex, Ltd. (Gal. 481).

Claimed to be the first of its kind on the market is an immersion heater complete with thermostat mounted on a 1½in B.S.P.T. head. This is one feature of a new range of "U" type and grid immersion heaters shown by Aidas Electric, Ltd. (D79).

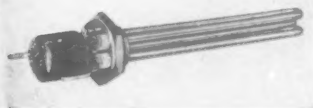
The first combined heating and cooking installation by Aga Heat, Ltd. (A5), incorporating their new water heater, was completed this year in a house at Richmond designed by F. Blair (student R.I.B.A.). This installation incorporates the firm's new Agamatic domestic water heater which is shown for the first time at the Building Exhibition. Finished in cream enamel and with thermostatic control, the Agamatic, illustrated here, has a foot operated ashpit door and is suitable for 40-100 gallon hot water cylinder. The



The Janitor Cokette, one of the firm's boilers which can be seen on stand L 243.

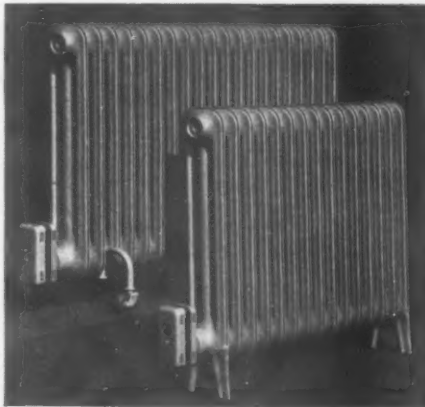
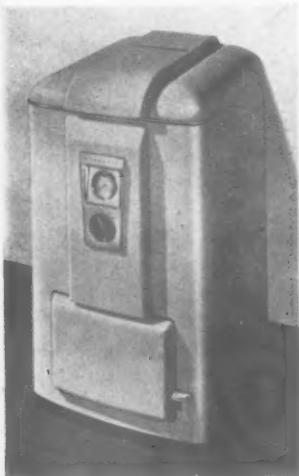
model "C" Agamatic is designed to conform in appearance and dimensions with Cooker models C and E.

Heating is of little use if the heat is lost through draughty windows and doors. Since many are still obliged to live in old houses where modern insulation methods do not prevail, attention may be drawn to the advisability of spending a little extra, when installing a new heating appliance, on excluding draughts. The Atomic Draught Sealing Company (N 261), Chamberlin Weatherstrips (Gal 468) and Sealdraught, Ltd. (Gal 400) show easily fixed strips for fitting to doors and windows. The extra comfort provided, not to mention the saving on fuel, is well worth the cash.



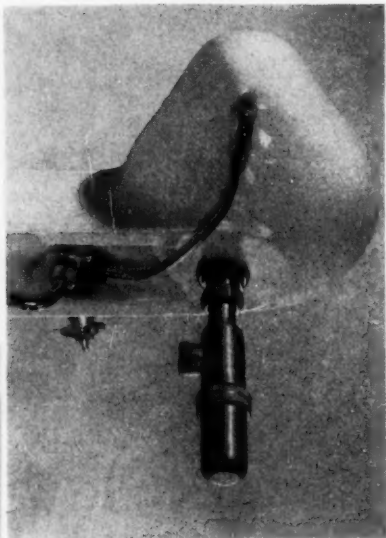
Above: the new Aidas UT type immersion heater with thermostat mounted on B.S.P.T. head.

Below: the new Agamatic water heater. For further details of both items see text.



Above: oil-filled thermostatically controlled radiators shown by Dimplex Ltd. One model is fixed, the other is on castors.

PLUMBING, DRAINAGE, ETC.



Above: one of two new exhibits shown by Econa Modern Products Ltd. This is a miniature bottle trap made of copper tube. The trap is 1½ in diameter and about 5 in high. The seal provided is 3 in. The trap is for use in drinking fountains.

IN this category are here included soil systems, internal plumbing and plumbing fittings.

Not so long ago the idea of internal soil drainage was considered anathema. Modern practice has almost reversed the position and internal ducts for drainage are now accepted as the right thing for multi-storey building. The choice of system for satisfactory installation in ducts needs care however and snags are perhaps more easily spotted when actual installations are seen than from drawings and description.

On the stand of B. Finch & Co., Ltd. (A 11), the main theme is an example of a high-class installation for flats, including internal ducting. The duct is cut away to show the relation of the company's Spruce-Thrower Soil Unit in relation to stack and waste pipes.

A single soil pipe serving two houses is part of the exhibit shown by Econa Modern Products, Ltd. (B 25). Two baths, two basins and two W.C.s, all connected to a single duplex soil pipe, will be discharged simultaneously at the request of architects or sanitary engineers to prove that seals remain unbroken. On this stand, too, is the drinking fountain deep-seal bottle trap illustrated here, as well as demonstrations of rapid assembly of a complete Econa single-pipe plumbing system in copper.

On the stand of the King's Langley Engineering Co., Ltd. (Gal 414), joints will be made in copper tube with Kingley "coupling" for sizes up to 2 in and with Kingley "senior" for 2½ in sizes upwards. Joints will be subjected to pressure tests and visitors may make joints themselves.

Never previously shown by Samuel Gratix, Ltd. (N 262), is a 4 in copper soil stack, complete with branch pieces showing prefabricated bath and lavatory wastes.

Two flushing valves—both shown for the first time—can be seen. One is shown by Victory Valves, Ltd. (Gal 437), the other by Lloyd Doig & Co., Ltd. (Gal 430). The latter, known as the Dal has been installed in many of the buildings erected by the occupation forces in the British Zone in Germany. Amongst the advan-



Above: a new flushing valve of German manufacture shown by Lloyd Doig and Co. This class of fitting, for attachment to pipe supply, requires no water waste preventer tank and is accepted by some water authorities.

tages claimed for this type of device are water saving, noiselessness, and immediate reuse if necessary after flushing. There is, of course, the added advantage that the lack of overflow pipe prevents the dripping down walls which occurs in old-type water waste preventers in which the ball-valve is badly adjusted. The number of water authorities accepting this type of device seems to be on the increase.

For industrial buildings and other places where large numbers of taps can, through carelessness, waste thousands of gallons, consideration given to self-closing types is probably worth while. Peglers, Ltd. (E 102), are showing working samples of their "Prestex" non-concussion, self-close models.

SANITARY FITTINGS

HALFWAY between drainage and sanitary appliances and embracing both categories is a new unit shown by Proved and Producing Properties, Ltd. (Gal. 410). This exhibit is the Destrol closet, illustrated here. The tests carried out on this chemical closet were described in a paper by Dr. E. Carr which was published in the *Architect and Building News* of October 25, 1951. The closet is self-contained, requires no ventilation and by progressive precipitation reduces the sewage to an odourless and harmless liquid. This is brought about by the addition of the Destrine chemical compound of the container; whilst it is a highly efficient antiseptic it is non-corrosive, and when mixed with the contents of the closet causes rapid disintegration. At the same time bacterial activity ceases almost instantly. Disintegration is a continuous process and is accelerated every time the closet is used. After a period of time, varying with usage, the contents, consisting of liquid with a small amount of sediment, are

drained away to a small soak-away simply by pulling a small knob. In the "de luxe" model the sewage is reduced to sterilized liquid which is then returned to the flushing tank for re-use. The amount of water used for these closets is said to be 5 per cent of that used in normal flushing closets.

Sanitary appliances for schools, hospitals and factories are being shown by W. N. Froy & Sons (Q 304). Latest developments in equipment for factory ablution rooms includes circular ablution troughs.

Adamsez, Ltd. (C 55), have never previously shown the "Lotus" lavatory basin for hospital use or the "Smada" rimless closet pan, both of which are on their stand.

A new sanitary suite in colour, never previously shown, consists of a low-level closet, a pedestal lavatory and a bidet, all of which conform in design with a new bath. These can be seen on the stand of Ideal Boilers and Radiators (Q 308).



The new Destrol chemical closet. See text.

KITCHEN EQUIPMENT

AMONGST products shown for the first time under the above head is the DC 3 "three-in-one" kitchen unit on the stand of Easicle Porcelain-Enamel (1938), Ltd. (K 224). This consists of an enamelled wooden cabinet with a hard-wood working top on which is a removable draining board of white porcelain enamelled pressed steel. The unit is adjustable in height to suit different sink levels and is designed for fitting on either side of the sink.

Working tops in kitchens must be hardwearing, easily cleaned and preferably decorative. The combination of all three qualities is a feature of "Warerites" stand (D 81). The uses of the firm's laminated plastic sheet are demonstrated on this kitchen designed stand as surfacing for walls, shelves and doors as well as for all working surfaces. New patterns shown include the Festival Crystal designs and "Stardust" designs in several colours.

New models of crockery washing machines for industrial and domestic use, together with other kitchen equipment, sinks and furniture are shown by Staines Kitchen Equipment (B 24).

The "Hostess" sink is a new addition to the range of Ideal Boilers & Radiators, Ltd. (Q 308). This is a cast iron porcelain enamelled sink which will be shown, as indicated in our illustration, on a new enamelled steel cabinet. The sinks are available separately.



Above: the "Hostess" sink with the new design of steel cabinets indicated. See text for details.

GLASS AND GLAZING

FIVE new items are in the Glascrete range manufactured by J. A. King & Company, Ltd. (F 131). First of these is a new rooflight construction using 12in x 12in glasses and capable of spanning 14 to 15 feet. This construction is incorporated in a canopy on the stand.

Then there are precast concrete roof units for shell roofs and precast concrete surrounds for metal windows.

A grid window in which the size of the panes can be varied, as distinct from the normal grid involving a constant glass size is shown as being a suitable treatment for large windows as the astragals are bolder and will carry over larger spans. This firm have recently evolved a new method (patent applied for) by means of which preformed double glass units have a dehydrated and sealed cavity made under factory controlled conditions. The novelty lies in the fact that the distance between the glasses can be varied to suit the thickness of the construction required. In addition to providing both sound and thermal insulation, the construction, by virtue of this variability in thickness, can be used in canopies, shell roofs, etc., in which the depth of the concrete varies and thus allows a flush glass and concrete surface in plane with the upper and lower surfaces of the surrounding roof. Glass walls and partitions can be constructed with these units, and here again the overall thickness can vary to suit conditions.

At the last Building Exhibition, James Clark and Eaton, Ltd. (L 237) showed the original smooth finish type of their

ventiblock. These ventilating glass bricks are now available in patterned designs as illustrated on this page. Since the previous exhibition, several new designs have been added to the firm's range of figured rolled glasses; these are included in a group display on the stand.

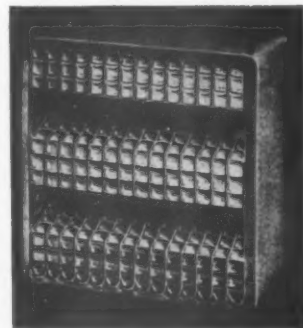
Prototypes of six new patterns of figured rolled glass are shown by Chance Brothers (H 175). Whether these are put on the market will depend on the reaction of architects. In view of the increased use of glass in building the presentation of new glasses, on approval so to speak, is to be commended. The plan to produce these new glasses has been largely influenced by the demand for contemporary designs with more decoration. Two of the six have been designed by J. Beresford Evans.

New methods of fixing rough cast glass domes are shown by Pilkington Brothers, Ltd. (G 144). The system shown largely eliminates the metal work hitherto necessary with these units. Another feature of the stand is a shop window flower display in a specially refrigerated atmosphere. The glazing of this refrigerated area is an "Insulight" double glazing unit 80in x 100in, which demonstrates the clear vision obtained compared with single glazing.

A mild steel combined curb and lining for use with rectangular one-piece glass roof domes is shown by T. & W. Ide, Limited (O 285). The glass overlap is combined with the curb in such a way that the clear visibility size of the actual

glass is increased by as much as one-third over normal construction. A 12ft circular domelight in aluminium alloy glazed with various bent glasses is also shown with examples of decorative glass.

Glazing with lead-covered bars can be seen on the stand of Lead Industries Development Council (H 188).



One of the decorated patterns of "Ventiblock" which is shown by James Clark and Eaton. See text.

PLANT AND TOOLS, ETC.

THE scope of the heading plant and tools here ranges from concrete machinery and tractors, etc., through hand and power tools for building specialists to the tools the architect uses in his office. Omitted, except for a page of pictures of new machines, is woodworking machinery, which is the subject of a special review in next week's issue of the *Architect & Building News*.

For visitors seeking new developments there is plenty to see. As the president of the N.F.B.T.E. pointed out in a recent speech, machinery is only useful to the builder if it saves time and labour. We believe that most of the items described and illustrated in the following pages can justify the capital outlay involved. To this must be added the proviso that some of the items shown are only practicable for large builders, while others have special appeal for the smaller firms.

The D.S.I.R. exhibit on tower cranes is described on page 578. Mobile hoist towers do not, perhaps, come in this category, but for work up to 20 feet there is a completely redesigned model to be seen on the stand of J. Christopher & Sons, Ltd. (K 127). The new hoist has a single or double barrow platform which hinges back for easy transit.

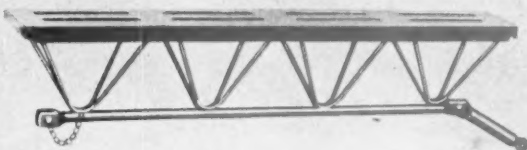
News of what appears at first sight to be a real advance in centering technique comes from Blaw Knox, Ltd. (P 291). This firm are showing "Hico" centering for the first time in this country. The centering consists of lattice girder units of various lengths. Strength is obtained from scientific stressing which results in lightness. Units are clipped together and turn-buckled up on the lower boom. This enables the girders to be stressed after the load has been applied. One unit is illustrated on this page. A major advantage seems to be that props are not necessary, a factor which speeds up building by leaving floors below the centering free of encumbrance. Nor is any weight put on new floors below since all loads are carried by the walls or building frame.

Concrete shuttering accessories by Rawlplug, Ltd. (L 239), first shown at the last Building Exhibition, have now had time to prove their value. The demand for these Rawlties and Rawloops has justified the firm's faith in them and any visitor who has not seen these time-saving devices should pay a visit to the stand where numerous fixing devices and tools are to be seen. Suspended formwork, vertical formwork and flexible formwork are shown by Kwikform, Ltd. (D 71). Flexible formwork has particular interest for those engaged in design and erection of barrel vault construction. Also shown is the firm's unit-frame scaffolding.

A new scaffold board which has alternative uses either as shuttering board or road form is shown by H. L. Reynolds, Ltd. (Gal 434). These boards are made of 14 gauge steel treated with rust preventative. The width is 9 in by 1½ in thick. Two or more boards can be jointed together by a sleeve to produce long boards.

Minor alterations in design have been made to steel shuttering which was first shown at the Public Works Exhibition in 1947 by Guyrex Equipment, Ltd. (Y 383).

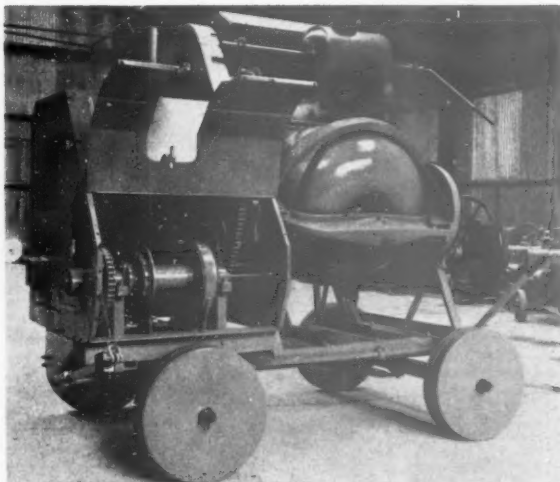
The originators of travelling cradles, Palmer's Travelling Cradle & Scaffold Co., Ltd. (H 172) have arranged a most informative exhibit illustrating the latest developments in the use of steel and alloy tubular scaffolding, travelling cradles,



A new and interesting development in centering for formwork is described on this page. Above is one of the units which when joined together by turn-buckles with other units forms a prestressed girder level support. See Blaw Knox.



Shown for the first time in Great Britain is this Arpic 105 portable compressor powered by a Perkins P.4 Diesel engine.



The new combined 7.5 BH mixer and winch. The small barrel winch, similar to a builder's friction winch, is driven from the same unit as the mixer.



Architects: Messrs. J. A. Chatwin & Sons.
Contractors: Messrs. W. Sapcote & Sons.

Restoration . . .

St. Mary's, Acocks Green, Birmingham, which was severely damaged by bombs, has recently been restored and redecorated. ELLICEM Cement Paint was specified for all internal walls (old red brick with diamond pattern of blue brick at intervals). A light cream shade was used, giving maximum light reflection and durable decoration.

ellicem_{REGD.}

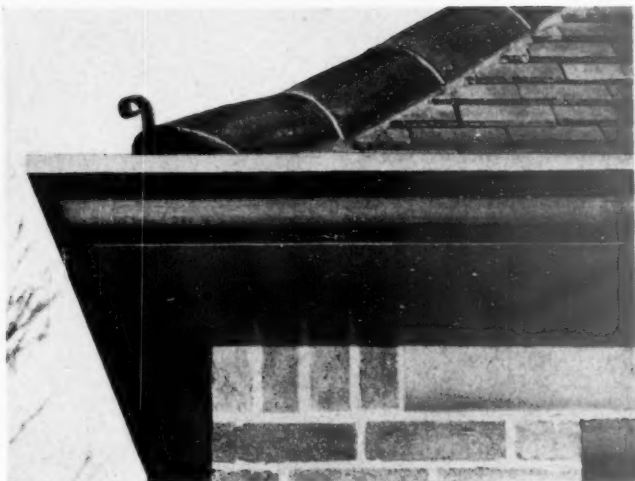
FOR DURABLE AND PROTECTIVE DECORATION.
APPLIED TO ANY CLEAN, SOUND SURFACE. NO IMPROVER REQUIRED.

For further information
and colour chart
write to me :-

Cecil Kahn



THE ADAMITE COMPANY LTD., Manfield House, Strand W.C.2. Tel. Bar 6233/6



FINLOCK GUTTERS

Save £30

PER PAIR OF HOUSES

OMISSIONS

9 yds. 11 in. Brickwork	160 ft. super of Roofing
160 ft. of 2 in. by 3 in.	80 ft. of Tilt Fillet
80 ft. of Fascia	80 ft. of Soffit
80 ft. of C.I. Gutter	Beam Filling
2 Outlets	4 Stopped Ends
2 Offsets	2 Lead Slates
Painting Gutters—Fascia—Soffit	
Reduction in Down Pipes and Drainage	

ADDITIONS

FINLOCK PRE-CAST EAVES COMPLETE WITH ALL FITTINGS FIXED IN ONE DAY

See our Stand No. 348 Row T at Olympia

FINLOCK GUTTERS LTD.,

20, ST. JOHN'S ROAD, - TUNBRIDGE WELLS, KENT

Telephone: Tunbridge Wells 20396 (three lines)

Works at:
Barstaple,
Cwmbran,
Leeds,

Devon,
Monmouthshire,
Yorkshire.

Musselburgh,
Southam,
Southborough,

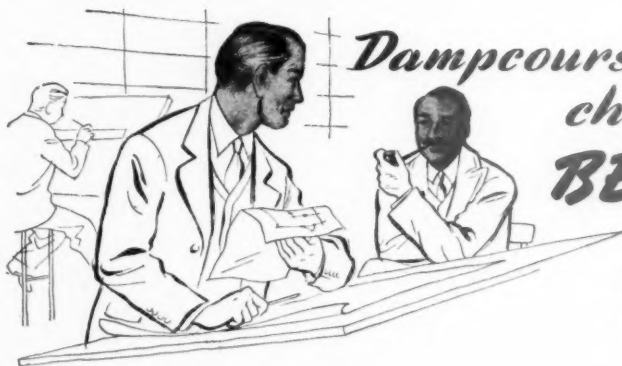
Midlothian,
Warwickshire,
Kent.

Over 200 County, City and Local Authorities are now using Finlock Gutters for their 1951 Programmes for every conceivable type of building. Police Housing, Schools, Libraries, Municipal Housing.

Acclaimed by Architects and the Trade as the finest advance in building construction.

Our statements with regard to saving in cost, are being confirmed every day by Quantity Surveyors. The actual amount varies and is dependent on the existing specification.

Finlock greatly improves the appearance of a building and being of fine waterproof concrete, reduces maintenance costs appreciably. Roof maintenance is greatly facilitated by the use of Finlock Gutters and painting is reduced to doors and windows.



*Dampcourse?... My
choice is
BESTOS!*

BITUMEN
DAMP-COURSE
(Asbestos Base)

Architects and Builders choose a dampcourse that will meet the requirements of any Building site. Bestos, manufactured entirely from mineral asbestos and asphaltic bitumens, is a flexible, water-proof dampcourse and absolutely permanent. Its composition renders it unaffected by normal building settlement, organic rot and capillary action.

Architects and Builders are wise to choose the best - BESTOS.

Architects everywhere specify

BESTOS

D. ANDERSON & SON LTD • STRETFORD • MANCHESTER
ROACH ROAD, OLD FORD, LONDON E.3.

JN257

heavy suspended scaffolding and the installation of permanent runways. Palmer's have ample supplies of builders' plant available for sale and hire.

Mills Scaffold Co., Ltd. (F 118), have a two-storey stand on which, amongst other exhibits is a model of the ski-jump. Heavy suspended equipment and barrel vault roof construction are also featured. Illustrated in last week's issue was the stand of Scaffolding (Great Britain), Ltd. (F 123 and Gal 485). This firm have a new ornamental ironwork division, examples of whose work will be shown. Modern scaffolding technique incorporating all the requirements of the new Factory Acts is included in the upper part of the stand. A mobile working stage is shown by Sterling-Safway, Sterling Foundry Specialities, Ltd. (C 67). A new extendible end frame which enables scaffolding to be passed through small manhole doors in boilers, flues, etc., is shown.

With the steady increase in the use of pneumatic tools interest focuses on fresh developments in compressor design. Shown for the first time in Great Britain is the portable compressor illustrated on page 576. This is shown, with other models, by Arpic Engineering, Ltd. (H 165).

Referring back to the first paragraph the president of the N.F.B.T.E. quoted the concrete mixer as one of the most valuable pieces of machinery a builder can possess. Millars Machinery Company, Ltd. (M 253), have produced a combined mixer and winch specially designed to deal with the delivery of concrete at high levels. This unit is illustrated on page 576.

A new patent volumetric measuring tank which will measure very small quantities accurately is shown by Stothert & Pitt, Ltd. (O 286), on whose stand it is shown, for the first time at the Building Exhibition with tilting drum mixers in hand fed and loader designs.

Lifting and hoisting machinery are shown by several firms. A. C. E. Machinery, Ltd. (O 281) are showing the midget winch illustrated on this page. This can be used by itself or coupled to a scaffold jib which is designed for easy attachment to tubular scaffolding. A surprise item on this stand is an electrically driven winch incorporating attachments for other building duties.

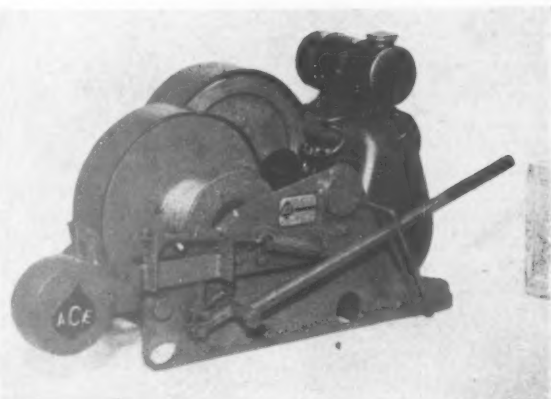
A new tower ladder, see illustration, is an exhibit by R. A. Lister & Company, Ltd. (H 170). The closed height is only 11ft; extended the platform height is 24ft 6in. The tower is hydraulically jacked and is mounted on an auto-truck.

Lifting appliances, cranes, concrete mixers and woodworking machinery are shown by George Cohen & Sons, Ltd. (F 114), and their associates.

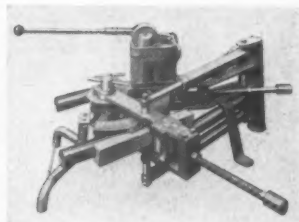
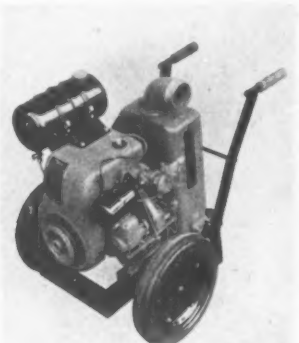
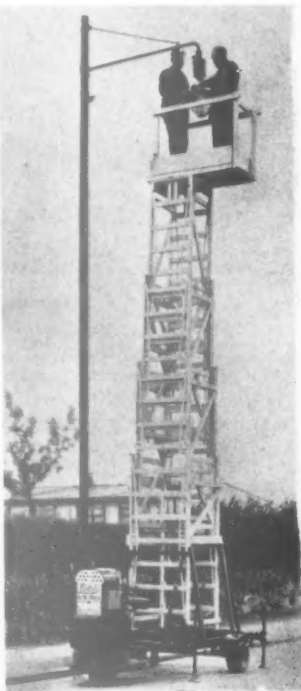
Rapid strides have been made in the past few years in the development of tube bending machinery of hand and hydraulic operated design. In the first category Lawler Ayers & Co., Ltd. (O 277) are showing their recently marketed ratchet operated model for bench fixing or with a transportable stand. Hydraulic models are also shown together with cutting tools and pipe vices. Plumbers and others who have to cut holes in awkward positions should see this firm's Laco hole cutter.

Shown for the first time by Hilmar Limited (D75) is a portable hydraulic bending machine. Here, too, hand models are shown.

A new 3in pump (see illustration) is exhibited by Warsop Power Tools Limited (E.105) together with 4in diesel and 1½in petrol models. This firm



The scale to which this illustration has been reproduced is misleading compared with other pictures on this page. The brick on end in the right of the picture gives the clue to the actual size of this "Midget" winch shown by A.C.E. Machinery Limited. Despite its small size the winch can lift loads up to 5 cwt maximum on three-speed gear and alternative rope rigs. For other new items shown by this firm see text.



Left above: the Lister "Eclipse" tower ladder mounted on a Lister auto-truck. Top right: the new 3in centrifugal pump shown by Warsop Power Tools Limited. The pump has a one-piece aluminium alloy casting. Total maximum head is 100ft, suction lift is 25ft and capacity is 15,000 gallons per hour. Below right: one of the Hilmar Ltd bending machines. This portable hydraulic model is shown for the first time.

PLANT AND TOOLS, ETC. (continued)

specialize in self-contained power-operated concrete breakers, rammers, etc.

For small mixing jobs Goodwin Barsby & Co., Ltd. (R316) are showing their minor mixer—the 3/2T illustrated on page 578. Larger models are shown.

Amongst smaller plant, tools and accessories, only a few can be mentioned. At the last exhibition Secomastic, Ltd. (A3) featured their pressure guns for applying Secomastic jointing. Remodelled types of hand pressure and compressed-air guns are now available; one is illustrated here with the specially treated filler cartridge.

A spiral ratchet screwdriver not exhibited before is shown by Stanley Works (Great Britain), Ltd. (G.156). This device was previously manufactured by North Brothers, Ltd., of Philadelphia—now part of the Stanley organization. Until quite recently these screwdrivers have been difficult to obtain in this country.

A firm hitherto principally interested in the manufacture of taps is showing this year a new plug-driving gun. Claimed to be the fastest of its kind in the world for setting plugs—four a minute—in steel, wood and concrete, this gun can be inspected on the stand of F. H. Bournier & Co. (Engineers), Ltd. (Gal. 491).

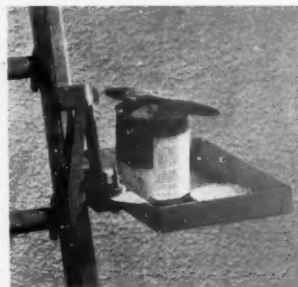


The improved model of hand pressure gun shown by Secomastic Ltd. For this a 50 per cent reduction of effort in operation is claimed. Note the cardboard filler cartridge.

For painters and decorators the ladder attachment pictured on this page is a neat device shown by the Eclipse Rail Track Ladder Co., Ltd. (F 120).

An accessory for attachment to crane jibs is new. This is shown by B. and A. Engineering Company, Ltd. (B 16) who specialize in crane gear such as safe load indicators. The new grabline is automatic and provides a simple means of preventing buckets or grabs from swinging and slewing. Our illustration shows the device which has a cable drum controlled by a torsion spring.

Considerable interest is being shown in tower cranes at present. Many are already in use in this country on large building projects, but on the Continent smaller types are being used on quite small buildings. Officers of the Building Research Station have visited the Continent to study their use in the field and two types are now being studied at the Building Research Station. Tentative conclusions are that these machines are suitable for use in handling the materials on typical British housing sites and that with good organization, they should enable considerable economies in both time and money to be made. Further investigations are needed to enable the

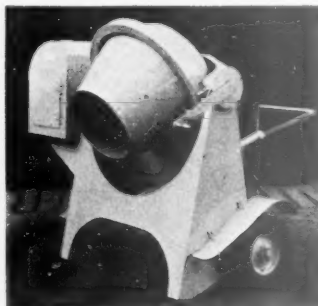


A tool or paint tray for easy clip-on attachment to ladders is a neat device which can be seen on the Eclipse Rail Track Ladder Company's stand. This product has not been shown at the Building Exhibition before. See text.

full possibilities of these small tower cranes to be assessed and to identify the difficulties that have to be overcome if the machines are to be used on housing sites in this country. These investigations can only be done with the co-operation of the building industry, and the object of showing this subject at the Exhibition is to enlist the industry's help.

The transportation and handling of materials on housing sites is costly in manpower and therefore money. An analysis of the work on a number of sites shows that about 280 tons of material of one sort or another are used in building the carcass of a pair of semi-detached houses and much of this material has to be handled more than once. On the average this means about 550 man-hours of work and costs about £88. Since the war research workers have helped manufacturers to design and put into production many machines such as powered barrows and skips, transporter booms and hoists of various kinds, capable of handling some of this work and these are now proving their worth on housing sites all over the country. The attempt to provide a crane that will handle all types of material economically and quickly is a further development towards the improved mechanization of house building.

An exhibit on the use of tower cranes, prepared by the Building Research Sta-



The minor 3/2T mixer, one of the exhibits on the stand of Goodwin Barsby & Co. Ltd. A good portable one-man machine for repair jobs and estate work.

tion, is included in the D.S.I.R. stand (Gal. 451). The site organization necessary to make full use of the crane will be described and models of accessories used on the Continent to facilitate the handling of the various materials will be shown.

For timber connection Macandrews & Forbes, Limited (S 333) are showing a new type of connector for secondary fastenings. Easily fixed by nailing, they give great rigidity to all forms of timber framing. Trip-L-Grip Framing Anchors have many applications, as for instance, fixing roof trusses, joists and studding to wall plates, fixing together sections of prefabricated buildings, all types of framings in wall openings, shuttering, strengthening packing-cases, and in all forms of timber framing where expensive methods of jointing are not essential, etc. This firm are also showing "Bulldog" round toothed-plate connectors for all forms of light and medium structures. These are available double-sided and single-sided for timber to timber, or timber to steel, etc. For medium and heavier timber structures such as bridges, towers, large span roof trusses, grandstands, and for use with hardwoods, "Teco" double-bevelled split ring connectors ensure easy insertion in pre-cut grooves and greater



The automatic grabline, a new product shown by B. & A. Engineering. This grab or bucket steadying device can be simply bolted to crane jibs, either externally as shown or internally.

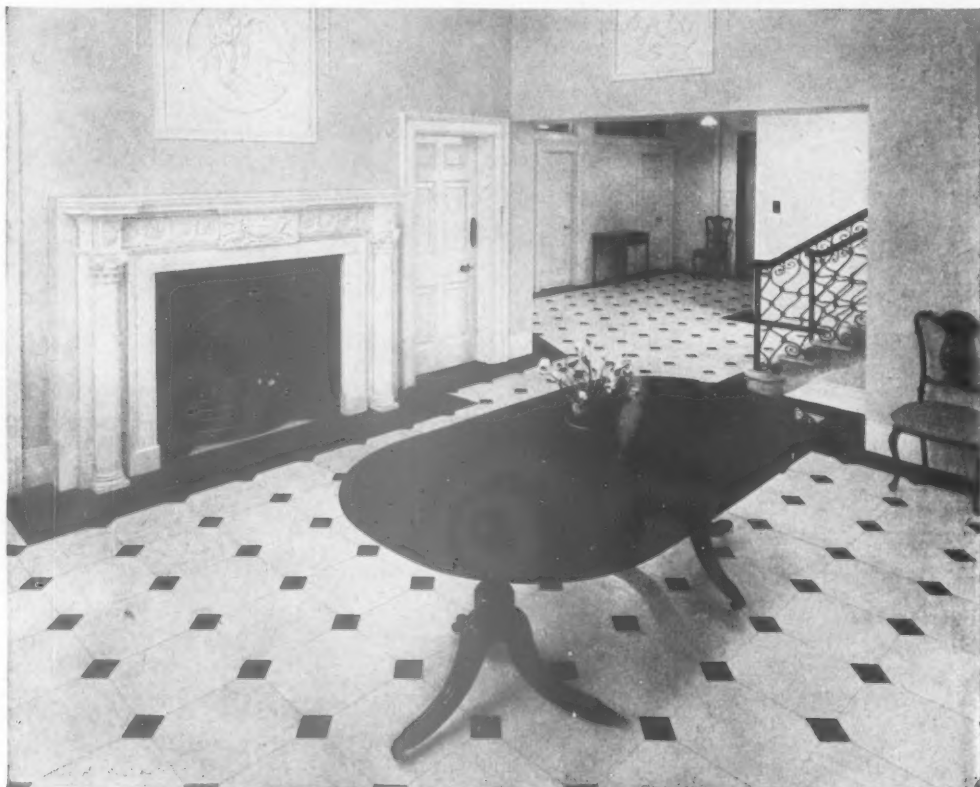
load capacity. This timber connector is now being produced and is coming into use in the U.K. Large quantities have been used here in the construction of heavy timber towers, showing economies in erection costs and timber content of these structures.

Of several cranes which Ransome and Rapier (D 73) are showing, attention may well focus on the new Rapier 5 super mobile model. This is mounted on a chassis with two front wheels and twin-wheel castor. Petrol-electric or diesel-electric drive with individual motors for hoist, derrick, slew or travel motions. This crane with the full vision cab is available with either short or long jib extension. Crane travels, slews and derricks with full load—there are no props or jacks.

As manufacturers of a wide range of British-made portable power tools, the Consolidated Pneumatic Tool Company, Limited (K 215), show examples from every category of portable power tools. A feature of the display is a small portable compressor from the CP range, specially staged to illustrate the variety of work which comes within the scope of a small plant. With it are shown all the tools which can be operated from this machine.

(Continued on page 580)

Designed Rubber Floors



Architect: J. C. Lindforth, M.Inst.R.A.

This copy of an old stone floor laid at the High School for Girls, Bath, is a contemporary example of work in the AVON tradition. The floor was installed by AVON craftsmen and will give many years of silent service. Avon Rubber Floors are colourful and permanent and are ideally suitable for Banks, Hospitals, Offices, Cinemas, Hotels and Ships. A warm welcome awaits you at the Avon Stand where specimens, photographs, architects' data sheets and all relevant information will be available.

by
AVON

BUILDING EXHIBITION · GRAND HALL · OLYMPIA · STAND No. 54 ROW C

The Avon India Rubber Co. Ltd., Melksham, Wilts.

*The hub of production
is the drawing office*

Not many years ago the drawing office was generally considered a necessary evil, and was housed in unsuitable rooms grudgingly maintained and scantily equipped.

To-day, however, it is realized that the output of the works is dependent on the output of the drawing office, and that the draughtsmen deserve to be equipped to enable them to work with maximum efficiency.

For over 50 years we have specialized in the manufacture of drawing office equipment, and have contributed towards the improved conditions of the modern drawing office.



Hall Harding Ltd.

VISIT OUR STAND AT THE
BUILDING EXHIBITION No. 416.
Grand Hall Gallery.

STOURTON HOUSE · DACRE STREET · LONDON SW1
Telephone: WHITEHALL 5302 (5 lines)

BENHAM

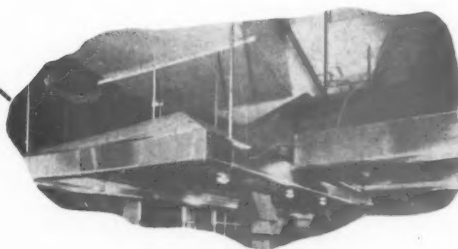
COOKING APPARATUS
MANUFACTURERS
All fuels



KITCHEN PLANNING
KITCHEN INSTALLATION



HEATING AND
VENTILATION

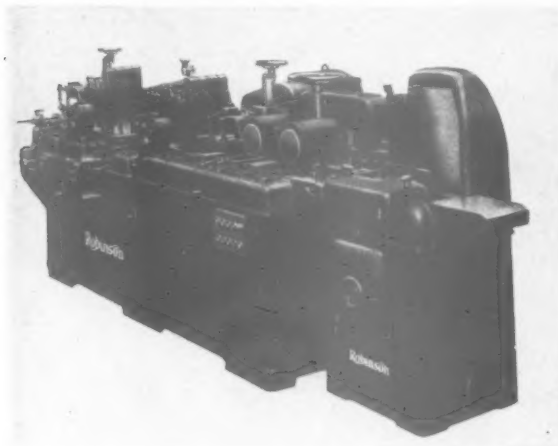


Benham and Sons Limited
66 Wigmore Street, London, W.1

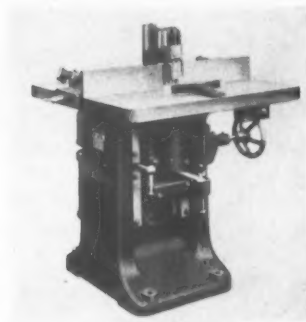
Telephone: WELbeck 9253 (16 lines)

BRIGHTON : BIRMINGHAM : BOURNEMOUTH
MANCHESTER : CARDIFF : GLASGOW

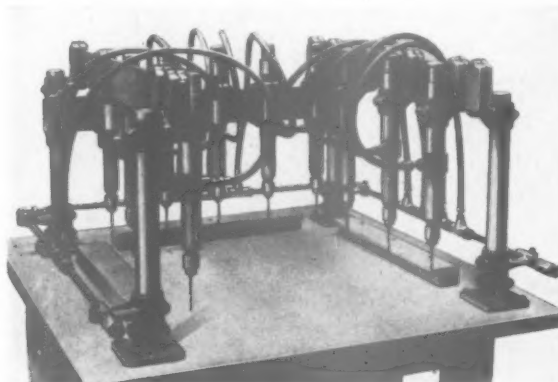
WOODWORKING MACHINERY



Above: The Robinson 7in x 3in six-cutter moulder never previously shown in this country.

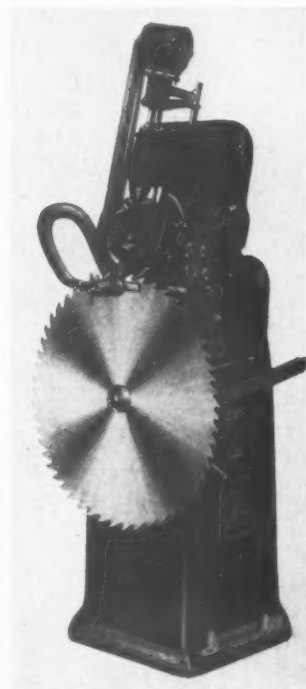


Above: Wadkins new high-speed spindle moulder.



Above: A Brookman self-feed multi-drill shown for the first time at the Building Exhibition.

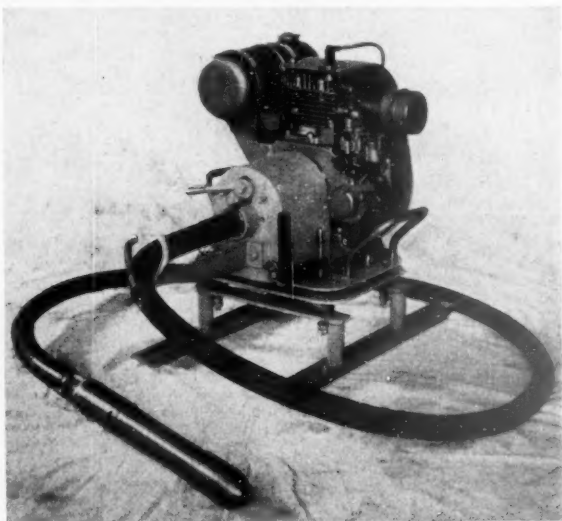
Below: The new Bursgreen surface planer and thicknessing machine fitted with a new type of two-knife circular cutter block.



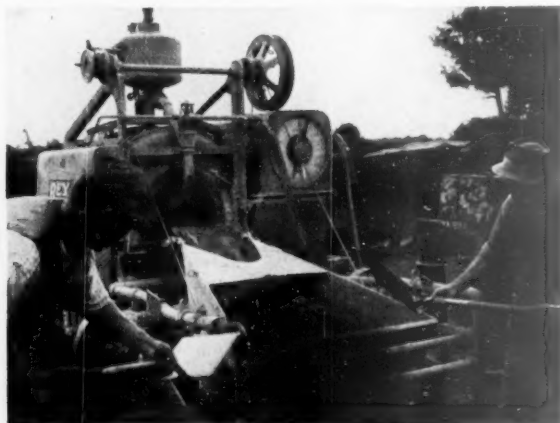
On this page are five new wood-working machines which are at the exhibition. The woodworking machinery section will be the subject of a special review in the "Architect and Building News" of November 22.



Bulk handling of cement in containers from which it can be offloaded to levels above ground is a feature of the exhibit of Thomas W. Ward (U 350).



Above: a vibrator unit, the "Humdinger" makes its first appearance at the Exhibition on the A.C.E. machinery stand (O 281).
Below: the new Blaw Knox lightweight folding weigher linked to the Rex 75 mixer. This equipment for accurate concrete mixing has not been shown before.



Prominent on this stand are the various classes of equipment of everyday interest to the builder and contractor, such as concrete breakers, picks, claydiggers, rock drills, pumps, bush hammers and vibrators. These include a range of stone tools for cleaning up old bricks, cement joints, etc. In addition there are many items of interest for more specialized classes of work.

The Chaseside light excavator is a specialized machine for the builder, but its use is not restricted to one or two specific jobs. Among the many uses to which this machine can successfully be put are site clearance, including the removal of small trees and hedge grubbing, road making, transporting and laying drains and backfilling trenches, digging foundations, feeding concrete mixers and



The three-in-one metal scaffold board which may also be used for shuttering or road forms. This new device described on a previous page is shown by H. L. Reynolds Ltd.

transporting the mix, and for material handling on the site, particularly where adverse weather conditions reduce mobility.

The Thwaites Dumper is taxable for road use and is efficient yet foolproof, being operated by pedals for forward and reverse speeds. The design is very simple, no gear box is used. With a 6ft turning radius it is manoeuvrable and good performance over rough ground is claimed since the driving wheels are situated beneath the load. The long wheelbase eliminates spilling by reducing the effect of uneven ground.



The Chaseside "light excavator" fitted with brick stacker attachment. The excavator is designed specially for builders and may be seen on stand (H 169).

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

CONTRACT • NEWS •

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

ENGERT & ROLFE LTD. COPPERTRINDA

The best Dampcourse yet produced
POPLAR, E.14. EAST 1441

BRIGHT'S ASPHALT

THANET WHARF,
COPPERAS ST., DEPTFORD,
S.E.8

★ Contractors' Tools

SHOVELS, FORKS, RAKES,
BARROWS, LADDERS,
RAMMERS, CROWBARS,
AXES, HAMMERS,
WINCHES, HOISTS.

Write for descriptive leaflets today.

THO^o W. WARD LTD.

ALBION WORKS SHEFFIELD
Phone: 26311 (22 lines) Grams: "Ketco."

DAMP WALLS BONE DRY

WITH ONLY
ONE COAT OF

Penetrex

WATERPROOFING LIQUID

Absolutely Colourless. Penetrex does its job thoroughly, on all surfaces. Outside or inside. One gallon covers 30 Square Yards. Sold by Builders' Merchants in all sizes from Quart tins to 10 Gallon drums. Send for price and name of nearest Stockists to:

F. A. WINTERBURN LTD.
(Incorporating Lithex Products)
HOLBORN STREET, LEEDS, 6 Tel.: 25692

SPANISH TILES

from Stock or Early Delivery

8" x 8" White Glazed 6" x 6"
and fittings

BOYDEN & CO. LTD.

228, High Street, Croydon.

CROYdon 4966.

OPEN BUILDING

BARMOUTH U.C. (a) (1) 1 block of 4 maisonettes, (2) either 30 or 54 houses, and (3) site preparations for 104 dwellings including roads, sewers, etc. (b) Mr. E. Ifor Price, Council Chambers. (c) 3gns each contract. (e) Dec 1.

BEBINGTON B.C. (a) Contract No. 7, 44 dwellings, Brackenwood Estate, Higher Bebington. (b) Borough Engineer, Brackenwood, Higher Bebington. (c) 2gns. (e) Nov. 30.

BECKENHAM B.C. (a) 2 pairs of houses in Ancaster Road. (b) Borough Engineer, Town Hall. (c) £2. (e) Nov. 26.

BERKSHIRE C.C. (a) Adaptations to form Institute of Further Education at Montague House, Wokingham. (b) County Architect, Wilton House, Parkside Road, Reading. (c) 2gns. (e) Nov. 29.

BOOTLE B.C. (a) Aged persons' hostel at rear of 47, Balliol Road. (b) Borough Surveyor, Town Hall. (c) 2gns. (e) Nov. 30.

BOOTLE B.C. (a) Scheme No. 17. 3 pairs of houses. (b) Borough Surveyor, Town Hall. (c) 2gns. (e) Nov. 23.

BRADFORD C.C. (a) Junior school at Eccleshill North. (b) City Architect, Town Hall. (e) Nov. 26.

BURY ST. EDMUNDS B.C. (a) Block of new conveniences in Abbey Gardens. (b) Borough Engineer, Borough Offices. (c) 2gns. (e) Nov. 26.

CAERNARVONSHIRE C.C. (a) 9 houses at Cefn Hendre, Caernarvon. (b) County Architect, County Offices, Caernarvon. (c) 2gns. (e) Nov. 26.

DOVER B.C. (a) 32 flats at Durham Hill. (b) Borough Engineer, Brook House. (c) 2gns. (e) Nov. 26.

DUDLEY B.C. (a) Adaptation as an aged persons' home of "The Woodlands," Dixon's Green. (b) Town Clerk, The Council House. (c) 5gns.

DURHAM COUNTY POLICE AUTHORITY. (a) 1 pair of houses with office and 1 pair of houses, for police, at Delves Lane, Consett. (b) Police Authority Architect, Court Lane. (d) Nov. 19.

DURHAM COUNTY POLICE AUTHORITY. (a) 2 pairs of police houses in Cutlers Hall Road, Blackhill. (b) Police Authority Architect, Court Lane. (e) Nov. 19.

EAST SUSSEX C.C. (a) Alterations and extensions to aged persons' home and erection of new buildings at The Martlets, Mill Lane, South Common, Chailly. (b) County Architect, County Hall, Lewes. (d) Nov. 20. (e) Dec. 31.

There has been a 'Stannah' in the industry since 1867

STANNAH LIFTS

LIMITED
PASSENGER, GOODS AND SERVICE LIFTS
49-51, TIVERTON STREET, LONDON, S.E.1
Telephones: HOP 1211-3063

MULLEN AND LUMSDEN

LIMITED
Contractors and
Joinery Specialists
41 EAGLE STREET, HOLBORN,
LONDON, W.C.1

Telephone: CROYDON:
LONDON: CHANCERY 7422/3/4. ADDCOMBE 1864

DENNISON KETT

& CO. LTD.

ROLLING SHUTTERS

& GRILLES · IRON DOORS
STAIRCASES · LIFTS
COLLAPSIBLE GATES

KENOVAL HOUSE
226-230, FARMERS ROAD
LONDON, S.E.5. Phone RELiance 4266

HIGH QUALITY WHITE FACING BRICKS

(S.P.W. BRAND)

As supplied to the WAR OFFICE, H.M.
MINISTRY of WORKS, AIR MINISTRY,
Etc.

Sample and Brochure
sent on request

M. MCCARTHY & SONS, LTD.

BULWELL · NOTTINGHAM

EAST SUSSEX C.C. (a) Secondary school, first instalment, at Burgess Hill. (b) County Architect, County Hall, Lewes. (d) Nov. 23. (e) Dec. 31.

ELLESMERE PORT U.C. (a) Erection and completion of Civic Hall. (b) Messrs. Gornall, Kelly and Shelton, 69, The Albany, Old Hall Street, Liverpool. (c) 5gns (payable to Council). (d) Nov. 30.

ESSEX C.C. (a) Junior and infants' school in Layer Road, Colchester. (Approx. value of contract £83,000). (b) County Architect, County Hall, Chelmsford, with full details. (d) Nov. 17.

ESSEX C.C. (a) Additional accommodation at Tom Hood Secondary Technical School (approx. value of contract £48,750). (b) Borough Engineer, Town Hall, Leyton, E.10, with full details. (d) Nov. 19.

ESSEX C.C. (a) Infants' school at Rookery Farm, Dagenham (approx. value of contract £37,500). (b) County Architect, County Hall, Chelmsford, with full details. (d) Nov. 21.

GODALMING B.C. (a) 26 dwellings, Binscombe Farm Estate. (b) Borough Engineer, Branksome, Falmer Grove. (c) 2gns. (e) Dec. 1.

GOLBORNE U.C. (a) 30 houses at Culcheth. (b) Engineer and Surveyor, Council Offices, Lorton, nr. Warrington. (c) 5gns. (e) Nov. 30.

HARROW U.C. (a) Alterations and additions to existing sanitary accommodation at Roxeth School. (b) Engineer and Surveyor, Council Offices, "Cottesmore," Uxbridge Road, Stanmore, Middx. (c) £2. (e) Nov. 28.

LEEDS C.C. (a) Chief Inspector's house and police station at Middleton Park Road. (b) City Architect's Office, Priestley House, Quarry Hill. (c) 2gns. (e) Dec. 3.

LONDON-CAMBERWELL B.C. (a) 60 dwellings, East Dulwich Road Estate. (b) Town Clerk, Town Hall, Peckham Road, S.E.5. (c) 5gns. (e) Dec. 17.

LONDON-CAMBERWELL B.C. (a) 136 dwellings, Sydenham Hill Estate. (b) Town Clerk, Town Hall, Peckham Road, S.E.5. (c) 5gns. (d) Nov. 21. (e) Jan. 3, 1952.

LONDON-WANDSWORTH B.C. (a) Block of 16 dwellings on the Rashleigh Street site, Clapham. (b) Town Clerk, Municipal Buildings, S.W.18, with details of plant, staff available and the names of 2 technical and 2 financial referees. (d) Nov. 21.

LONDON-WEST HAM B.C. (a) Contract 165. 24 maisonettes, Rogers Road area, E.16. (b) Borough Architect, 70, West Ham Lane, E.15. (c) 2gns. (d) Nov. 23.

LONDON-WEST HAM B.C. (a) Contract 162. 10 houses and 20 maisonettes in the Granville Road area, E.16. (b) Borough Architect, 70, West Ham Lane, E.15. (c) 2gns. (d) Nov. 19.

LONDON-WOOD GREEN B.C. (a) 26 flats at the junction of Clarence and Trinity Roads. (b) Borough Engineer, Town Hall, N.22. (c) 2gns. (e) Dec. 4.

THE MIDLAND JOINERY WORKS LTD
BURTON-ON-TRENT

The Sign of Quality
One of the best and most dependable names in Joinery.

THE MIDLAND JOINERY WORKS LTD.
BURTON-ON-TRENT

Established 1921. Tel. Burton 3685 (3 lines)

By Appointment to H.M. The King
LIGHTNING CONDUCTOR SPECIALISTS

J. W. GRAY & SON LTD.
37 RED LION ST. HIGH HOLBORN
LONDON, W.C.1. Tel. CHAncery 8701

Lightning Conductor Specialists and Church Spire Restorers

ENGERT & ROLFE LTD.

FELT ROOFING CONTRACTORS

POPLAR, E.14. East 1411

London's Finest new-secondhand Value ARCHITECTS' PLAN CHESTS

Steel & Wood Office Furniture
Filing Cabinets
Sales Chests etc.

M. MARGOLIS
378-380 BENTON ROAD - LONDON - E.11L. Phone: ERS-7336

QUANTITY SURVEYING
Postal Courses for R.I.C.S., I.A.A.S. and I.Q.S. exams, in all subjects of each syllabus. Tuition by well qualified tutors under the direction of the Principal, A. B. Waters, M.B.E., G.M., F.R.I.B.A. Descriptive booklet on request.

THE ELLIS SCHOOL
1830, OLD BROMPTON RD., LONDON, S.W.7
Phone: KEN 8641 and at Worcester

GIMSON LIFTS

Service is available throughout the country

GIMSON & CO. (LEICESTER) LTD
VULCAN ROAD, LEICESTER

Telephone LEICESTER 60272
Telegrams GIMSON LEICESTER

LOWESTOFT B.C. (a) Adaptations to provide laboratory, preparation rooms, etc., at Yarmouth Road Grammar School. (b) Borough Engineer's Office, Town Hall. (c) Ign. (e) Nov. 24.

MANCHESTER C.C. (a) Alterations to "Rosebank," Mersey Road, West Didsbury. (b) City Architect, Town Hall. (c) Ign. (e) Nov. 24.

NEW FOREST R.C. (a) Contract No. 4. 6 bungalows at Poplar Farm, Totton. (b) Engineer and Surveyor, Council Offices, Lyndhurst. (c) 2gns. (e) Nov. 26.

NEW HUNSTANTON U.C. (a) 7 pairs of houses, with paths, drains, etc. for Stage IV of the Hill Street site. (b) Mr. Harold Marsh, 14, King Street, King's Lynn. (c) 2 Gns. (e) Nov. 30.

NORFOLK E.C. (a) Secondary schools at Costessy, Diss and Methwold. (b) Chief Education Officer, County Education Offices, Stracey Road, Norwich. (d) Nov. 21. (e) Feb. 1, 1952.

N. IRELAND - NORTHERN IRELAND HOUSING TRUST. (a) 72 dwellings with engineering and ancillary works at Banbridge. (b) Northern Ireland Housing Trust, 12, Hope Street, Belfast. (c) £3. (e) Nov. 27.

OUNDE AND THRAPSTON R.C. (a) Scheme A, 16 houses and sewers at Brigstock and Scheme B, 10 houses, demolitions, site works, etc., at Upper Benefield. (b) H. G. Kenyon, Council Offices, Midland Road, Thrapston, Kettering. (c) 2 Gns. each contract. (d) Nov. 17.

ORRELL U.C. (a) 8 houses, Kitt Green Estate and 12 bungalows, Moor Road Estate. (b) Engineer and Surveyor, Council Offices, Orrell Post, nr. Wigan. (c) Dec. 1.

SALFORD C.C. (a) 57 flats, Lord Street. (b) City Engineer's Office, Town Hall. (c) 3 Gns. (e) Dec. 5.

SCOTLAND-BRECHIN B.C. (a) 30 houses at Springfield (separate trades). (b) Messrs. Wm. M. Patrick and Co., 63, High Street, Montrose.

SCOTLAND-SALTCOATS B.C. (a) 58 houses, New England site (separate trades). (b) Mr. Robert Rennie, 12a, Hamilton Street, Saltcoats. (e) Dec. 5.

SEDGELEY U.C. (a) 36 houses at Modenhill. (b) Council's Surveyor, The Limes, Dudley Road. (c) 2 Gns. (d) Nov. 17.

SMETHWICK B.C. (a) First instalment of major extensions to the Chance Technical College in Crocketts Lane. (b) Chief Education Officer, Education Offices, 215, High Street. (c) 2 Gns. payable to Borough Treasurer.

SUTTON AND CHEAM B.C. (a) Extension of the Central Public Library, Manor Park House, Sutton. (b) Borough Engineer, Municipal Offices, Sutton. (c) £2. (e) Nov. 30.

TONBRIDGE U.C. (a) Contract No. 2. 20 houses, Cage Farm Estate. (b) Engineer and Surveyor, Tonbridge Castle, Kent. (c) 3 Gns. (e) Nov. 26.

WALTON AND WEYBRIDGE U.C. (a) 80 houses, Brooklands Estate. (b) Engineers and Surveyor, Council Offices, Walton-on-Thames. (e) Dec. 1.

R. Wm. LOCKWOOD
BUILDERS & CONTRACTORS
JOINERY & DECORATORS, Etc.
345 GREEN LANE · ILFORD
Telephone No.: Seven Kings 7551

RIBA INTER. FINAL AND SPECIAL FINAL
Postal Courses in all subjects of the 1951 exam. syllabus (including Professional Practice) are conducted by
The Ellis School of Architecture
Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A.
1036, OLD BROMPTON ROAD, LONDON, S.W.7
Phone: KEN 8641 and at Worcester

So much depends on your Floors.
Compare the value of "Modernite"
Magnesite Jointless Flooring
MODERN TILE & FLOOR COMPANY LTD
82-82a, Brewery Road, LONDON, N.7
TEL.: NOR 4611-2

The WARRY UNIVERSAL HOIST
WITH AUTOMATIC SAFETY GATES
Designed to comply with the Building Regulations
The Warry Patent Building Equipment Co., Ltd.
FAGGS ROAD, FELTHAM, MIDDLESEX
Telephone: FELTHAM 4057-58

***WELTON R.C.** (a) 2 houses at Snel-land. (b) Messrs. Wm. Saunders and Partners, 24, Castle Gate, Newark-on-Trent, or 14, Mercer Row, Louth, Lincs. (c) 3 Gns. (e) Dec. 3. See page —

***WEST RIDING C.C.** (a) Primary school at Dalton, nr. Rotherham, and extensions to Maltby Grammar School. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2 Gns. each contract. (e) Dec. 3.

***WEYMOUTH AND MELCOMBE REGIS B.C.** (a) Shelter on the Esplanade, Weymouth. (b) Borough Engineer's Office, 6, Pulteney Buildings, Weymouth. (c) 2 Gns. (e) Nov. 30.

***WING R.C.** (a) 4 pairs of houses and construction of approx. 540 sup. yds. of access road at Marsworth, Bucks. (b) Mr. H. A. Rolls, 15, Bridge Street, Leighton Buzzard. (c) 2 Gns.

***WINSFORD U.C.** (a) 68 houses and 12 bungalows on the Greville Estate, Wharton. (b) Engineer and Surveyor, Council Offices, Over Hall, Winsford. (c) 10gns. (e) Nov. 27.

***WOLVERHAMPTON B.C.** (a) 1 pair of houses and 1 pair of houses with sub-office in Dixon Street, (2) 1 pair of houses with sub-office in Essington Way, and (3) 2 pairs of houses in Highlands Road, for police. (b) Borough Engineer, Town Hall, stating site or sites. (c) 2gns. (d) Nov. 19.

***WREXHAM B.C.** (a) 301 dwellings with external site works on Sections 1 and 2 of the Queen's Park Estate, Southern Area. (b) Borough Engineer, 31, Chester Street. (c) 3gns. (e) Dec. 3.

PICKERINGS' LIFTS

STOCKTON-ON-TEES
116, VICTORIA ST., S.W.1. Tel.: VIC 9840

"ALTRINDA" DAMPCOURSE

Supplied from Stock

ENGERT & ROLFE LTD.
Poplar, E.14. East 1441

BETTERWAYS LTD. INTERCHANGEABLE LINE and LETTER SIGNS

WORTON WORKS, WORTON ROAD, ISLEWORTH, MIDDLESEX
HOUSLOW 2100

NEW FLOORS for OLD Wood Floors Planed, Sanded, Repaired and Treated FLOOR RENOVATIONS Ltd

36 LAURISTON RD., E.9. Phone: AMH 1080
Sandpapering; machines for hire

One of the highlights
of the Battersea Pleasure
Gardens was the famous
Schweppes Grotto.

The modelled fibrous
plasterwork to the interior
and exterior of this
colourful feature, as well
as to the Kiosk, was
carried out by—

CLARIDGES (PUTNEY) LTD.
RAVENS COURT RD., RAVENS COURT PK., W.6
Riverside 7222

★ Dohm Vermiculite

FEATHERWEIGHT AGGREGATE

IN

Concrete, Plaster & Loose Fill

SLASHES DEADWEIGHT
INCREASES INSULATION

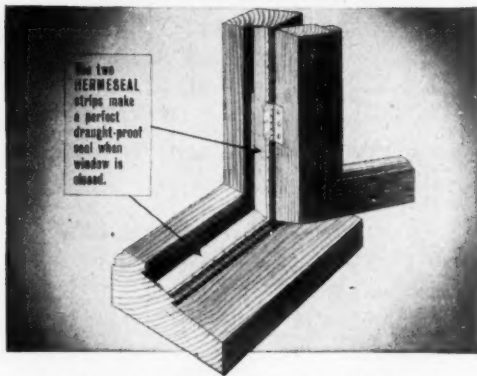
IN

SCHOOLS, FLATS, HOSPITALS
FACTORIES, POWER STATIONS, ETC.

★ DOHM LTD.

167, VICTORIA STREET, S.W.1. VIC. 1414/5/6 & 7913

Specify **HERMESEAL**
for all your draught
exclusion problems!



Draught exclusion means the prevention of infiltration... Here is a typical example

★ **BEFORE** In recent tests, the average gap around a large number of wooden double hung sash windows (5' 0" x 2' 9") was found to average 1/8", and the infiltration rate through these gaps, under a typical wind speed of 10 m.p.h., was as much as **106.0 cu. ft. per hour per foot of gap, or 1,906.0 cu. ft. for the whole window.**

★ **AFTER** The rate of infiltration after draught-proofing, was actually reduced to **14.7 cu. ft. per hour per foot of gap, or 264.6 cu. ft. per hour for the whole window.** The prevention achieved, therefore, was **1,641.4 cu. ft. per hour or 86.1%.** Tests on casement windows showed results up to 95%.

Such are the effects of efficient draught-proofing, that the conservation of heat and saving of fuel can be very greatly increased. In general about 50% of all the heat lost through the average window or door can be saved, or at least 20% of that lost throughout the average home, assuming a comprehensive installation.

THE PRODUCT can be fitted to any type of window or door—metal or wood—and consists of a specially designed strip of phosphor-bronze alloy which is guaranteed for ten years.

THE INSTALLATION is permanent and is fitted by our own specially trained staff.

THE COST is calculated on (1) The total footage involved. (2) The number of drop-seals or thresholds required. (3) Any carpentry or sealing work necessary, (4) Fitters' fares and/or subsistence as from nearest branch office.

HERMESEAL
PATENT DRAUGHTPROOF
WINDOW & DOOR EQUIPMENT

BRITISH HERMESEAL LIMITED
Head Office: 4 PARK LANE, LONDON, W.1.
Telephone: GROsvenor 4324 (3 lines).

ELECTRICITY

A Power Crisis threatens this Winter

*The reason—demand has grown
faster than the capacity to supply*

The number of domestic consumers has risen by over 1 million compared with three years ago—a 10 per cent increase—but annual domestic consumption is 20 per cent more than it was then. Industrial consumption is increasing even faster. British Industry is now using a fifth more electricity than a year ago and twice as much as before the War.

Still more power is needed for rearmament and for home and export production. It can be supplied, despite the plant shortage, by existing power stations—if... The "if" is that too many users do not switch on at the same time. When they do and "Peak" demands become too great, power cuts are necessary.

To help to stop power cuts, domestic users, shops, hotels and offices are urged to keep their electric fires switched off, and to cut down their demand in every possible way during Peak Hours. That will mean some sacrifice in order to keep the factories going.

Industries, in addition to their load-spreading arrangements, must use electricity with the utmost efficiency and economy. Above all there must be

NO WASTE

BRITISH ELECTRICITY





solve
the
problem
with
tiles

For simple and straightforward treatment or attractive decorative effect, tiles by Pilkington's are most suitable for interior or exterior walls and floors. An interesting example of unusual treatment is shown above. We also specialize in faience for fireplaces and certain other purposes and mosaic for floors.

Pilkington's
TILES
LIMITED

CLIFTON JUNCTION, NEAR MANCHESTER
London Office
27b Old Gloucester Street, Holborn, W.C.2
Phone: Holborn 2961-2

BE
Modern
FIT THE UP-TO-DATE AND
Reliable



**AUTOMATIC
FLUSHING
DEVICE**

OVER
1½ MILLION
IN USE!

- Easily installed
- Price competitive
- Silent in action
- Completely hygienic
- Automatically adjusted to suit any pressure
- Covered by a three year guarantee

BUILDING EXHIBITION
STAND Nos. 430 & 432 GRAND HALL GALLERY

Manufactured by Georg Rost & Sohne, Lerbeck, Nr. Porta, Germany.

Sole Distributors
in Great Britain and throughout the Empire

LLOYD DOIG & CO., LTD.

Regd. Office

17, ALBEMARLE ST., LONDON, W.1

Cables: Lloydco, London

GLASCRETE

• Reinforced Concrete & Glass •

The illustration shows another effective use of Glascrete windows at Messrs. William Perring's well known Watford Store, by their architect, Brian Peake, Esq., F.R.I.B.A.

This very practical method of construction is both decorative and economical.

"—and besides, Glascrete needs no painting!"



Manufacturers

J.A. KING & CO. LTD.

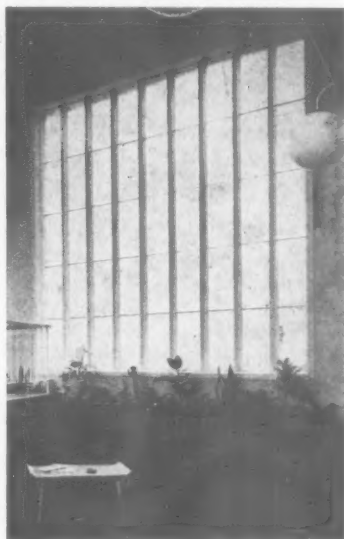
181 Queen Victoria St. LONDON, E.C.4

We are showing at the
BUILDING EXHIBITION
OLYMPIA

STAND 131

Row F

November 14th-28th



PLAN OF WINDOW. Mullions can be spaced up to 2' 6" centres.

Telephone: CENTRAL 5868 (5 lines)

DURING THE PAST 3 YEARS THE

LONDON
COUNTY
COUNCIL

HAVE BUILT INTO THEIR HOUSES MORE THAN

TENT THOUSAND

COMPLETE TRUE FLUE STACKS

SEE OUR EXHIBITS AT THE BUILDING EXHIBITION STAND 10 ROW A

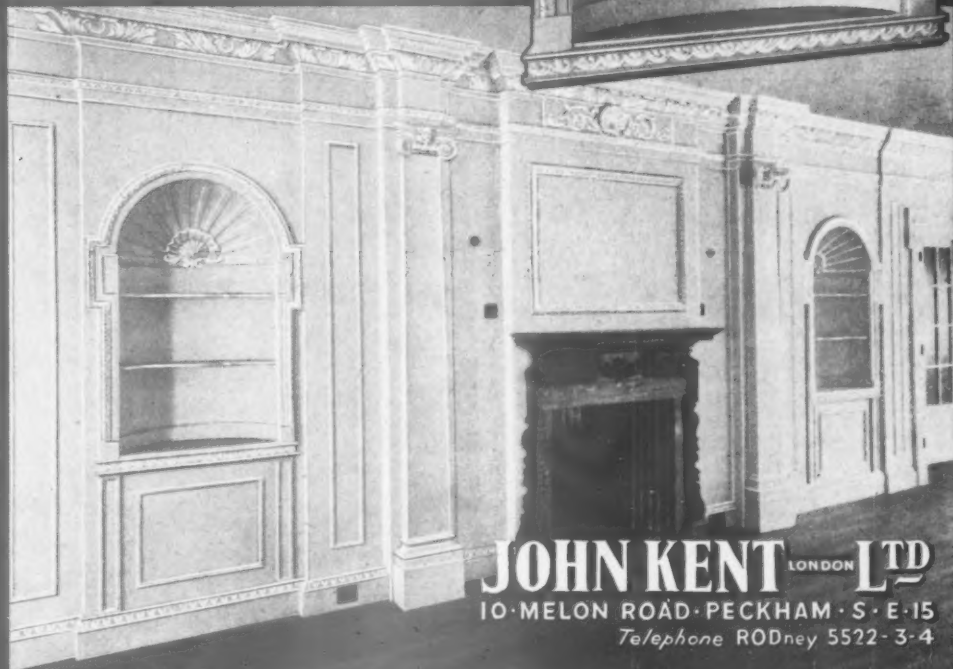
TRUE FLUE LTD. CONVECTOR HOUSE, ACACIA ROAD, ST. JOHN'S WOOD, N.W.8.
TELEPHONE: PRIMROSE 7161/2

Permanent Decorative Features Pre-cast in FIBROUS PLASTER

At the BUILDING EXHIBITION

Our Stand H.168 is a room decorated in the style of Robert Adam executed entirely in Fibrous Plaster.

ARCHITECTS WILL APPRECIATE our modern application of this ancient craft in producing a pleasing and permanent decoration suited to present day requirements, which can be carried out quickly and accurately to the Designer's specifications.



JOHN KENT LONDON LTD

10·MELON ROAD·PECKHAM·S·E·15

Telephone RODney 5522·3·4

Our experienced Technical Staff are at your service for advice,
designs, and constructional information.

CARRON COOKING APPLIANCES

in the main kitchen of Queen Elizabeth's Hospital, Birmingham



CARRON STEAM JACKETED TILTING PAN

Outer and inner pans of cast iron • Pan tilted by means of machine-cut worm gearing with turned handwheel protected by cast iron gear box • Outer casing of enamelled sheet steel or stainless steel

BATTERY OF CARRON STEAMING OVENS

Two baskets to each compartment • Steam-tight doors fastened with slip bolts operated by centre disc • Fitted with full safety precautions • Vitreous enamel finish

CARRON STEAM JACKETED BOILING PANS

Cast iron, with hinged counter-balanced cover of stainless steel or copper polished finish • Lifting handle with bakelite grip positioned to keep hand clear of vapour • Vitreous enamel finish



Esto Perpetua

These are Carron products made by modern Carron processes embodying the Carron tradition for fine workmanship begun in 1759



COMPANY • CARRON • STIRLINGSHIRE

Showrooms & Offices: 15 Upper Thames St., London, E.C.4; 22-26 Redcross St., Liverpool; 125 Buchanan St., Glasgow, G.1; 14 Ridgfield, Manchester, 2.

CARRON equipment...CARRON service

The highly experienced staff of experts at Carron is always ready to assist in selecting the equipment most suited to specific needs. Cooking installations utilising electricity, gas, steam, oil or solid fuel—there is Carron equipment for every requirement. May we send you full information about the comprehensive range of Carron installations and our Advisory Service?



Handmade Roof Tiles

A fine display at Building Exhibition Olympia

One stand that is bound to interest you at Olympia is the C.S. display of Handmade Roofing Tiles. Here you will see a full range of the tiles we make. Double

Roman—the ever popular Reynardo Bold Roll Tile—the Bambino—Spanish—Pantile and other shapes. The finest clay roof tiles in the world—and all made entirely by hand. Directly you enter Olympia make a point of calling at

Stand 84, Row D

COLTHURST · SYMONS & Co. Ltd.

Patent Tile Works · Bridgwater · Somerset



LONDON OFFICE: MR. DAWSON GOODEY, 6 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1.

Phone: WHItchall 7607



DESIGNED and ERECTED by SPECIALISTS

The Willenhall Motor Radiator Company in their new factory extensions believe in maximum possible light for the improvement of staff health conditions and consequent increased production. Standard's specialists successfully carried out the job.

THE STANDARD PATENT GLAZING CO. LTD

WORKS: DEWSBURY Phone: 1213-4

LONDON OFFICE Phone: HOUnslow 3079

Branches at BIRMINGHAM and BRISTOL

CONSTRUCTIONAL ENGINEERS

STEEL FRAMED BUILDING SPECIALISTS

WAREHOUSES
GARAGES
GANTRIES
BUNKERS
CONVEYORS
—
GUTTERS
ETC.



GIRDERS
PLATEWORK
—
WELDED
RIVETED
OR
BOLTED
CON-
STRUCTION

WALKER BROTHERS LIMITED

VICTORIA IRONWORKS

WALSALL

ENGLAND

Telegrams: WALKERS, WALSALL.

London Office: 66, Victoria Street, S.W.1.

Telephone: WALSALL 3136, 3137, 3138, 3139.

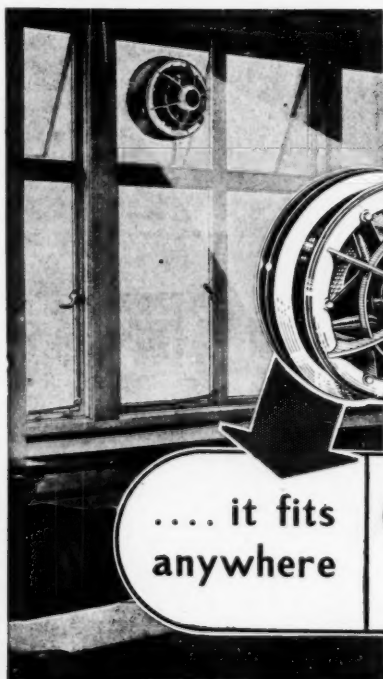
Telephone: Victoria 6049.

"THE DEVON FIRE"

CANDY & CO. LTD.

HEATHFIELD, DEVON

IN ADDITION TO THE WIDE RANGE OF DESIGNS,
DEVON SURROUNDS FOR HOUSING-SCHEMES
ARE COMPETITIVE IN PRICE AND ARE NOT ONLY
RENOWNED FOR THEIR QUALITY, BUT ALSO
THE FIRE OPENINGS CONTAIN THE WELL-KNOWN
BLAKEY PATENT LOCK-BACK
WHICH GUARANTEES COMPLETE FREEDOM FROM
TROUBLE, RESULTING IN
MAINTENANCE COSTS BEING CUT TO A MINIMUM.
OBTAINABLE THROUGH
LEADING BUILDERS MERCHANTS AND IRONMONGERS



THE AEREX '96'

OUTSTANDING FEATURES

GUARANTEED PERFORMANCE . . . 290 cubic feet per minute . . . independently tested by National Physical Laboratory in accordance with B.S.S. 848/1939.

SILENT MOTOR . . . Requires no servicing . . . bearings pre-lubricated. Suitable for 200-250 volts A.C. mains supply . . . consumption 30 watts.

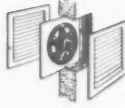
ATTRACTIVE APPEARANCE . . . Artistic design blends with any surroundings . . . durable stove enamel finish in cream and brown.

LOW WEIGHT . . . Only 9 lbs. 2oz . . . aluminium impeller frame and weather cowl . . . can be used with complete safety in large windows.

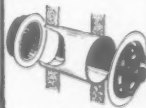
.... it fits
anywhere



WALL
MOUNTING



CONCEALED
MOUNTING



PROJECTED WALL
MOUNTING



HOOD
MOUNTING

AEREX LTD. • 6/7 NEW BRIDGE ST. • LONDON • E.C.4
Head Office: 46, RUTLAND PARK, SHEFFIELD Works: STOCKTON & GLASGOW



PLAN WITH ESAVIAN DATASHEETS

Specially prepared for Architects, this new folder contains eleven Datasheets showing various applications of Esavian sliding and folding doors, etc. Each type is illustrated by a detail drawing, specification and photograph. If you have not yet received your folder please write or visit us at the

ESAVIAN BUILDING EXHIBITION
Row K.
Stand 225/6

THE **ESAVIAN** PRINCIPLE
FOR DOORS, WINDOWS, PARTITIONS & FOLDING SCREENS

ESAVIAN HOUSE, 181, HIGH HOLBORN, W.C.1. TEL: HOLborn 9116. 101 WELLINGTON STREET, GLASGOW, C.2. TEL: CENTral 2349

Nature's hidden beauty revealed

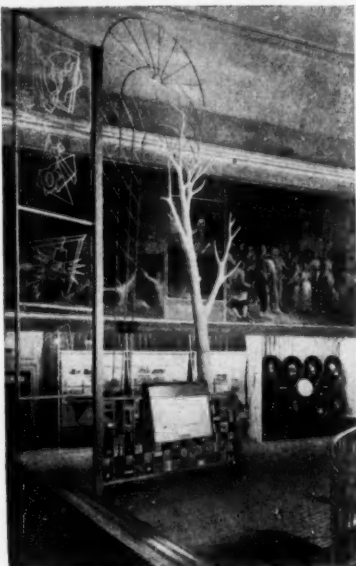
Manufacturers and
Importers • Contact
us for all your
veneer requirements

"The"
TIMES
VENEER CO. LTD.

CUT AT OUR LONDON MILLS

- English Walnut
- Caucasian Walnut
- Figured and Plain
- White Sytamore
- Weathered Sycamore
- Figured Mahogany
- Pencil Striped Sapele
- Olive Ash Butt Veneer
- Figured and Plain Oak
- Backing Veneer
- Constructional Veneer

Veneer Mills and Offices:
GOODWIN ROAD, EDMONTON, LONDON, N.9
Telephone: TOTTENHAM 6311 (3 lines) • Telegrams: "Veneerwaf, Southlat"



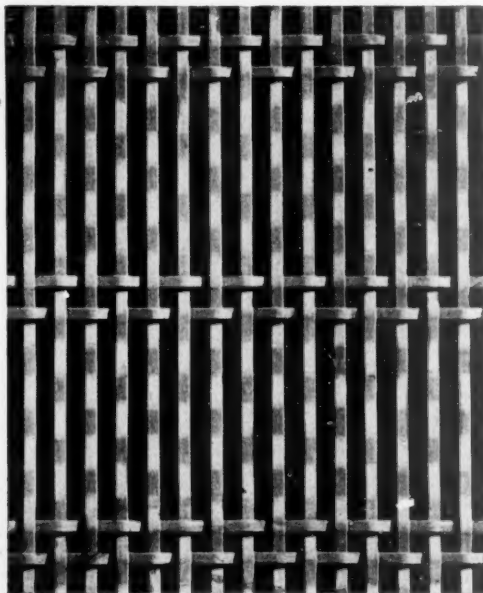
*Designed by
Miss Granville Barker for
Hulme Chadwick, Esq.*

THE LONDON SAND BLAST DECORATIVE GLASS WORKS LIMITED

DECORATIVE GLASS
MIRRORS
WINDOW SCREENS
DOOR PANELS
SIGNS
ADVERTISING GLASS

SEAGER PLACE, BURDETT RD., E3
TELEPHONE - - - ADVANCE 1074

BUILDING EXHIBITION · STAND 146 ROW G



HARCO RIBBON WIRE

The artistic effect of Harco Ribbon Wire renders it particularly suitable for use where care of design and appointment are of major importance. Architects will appreciate that it not only screens the unsightly, but allows free circulation of air. The patterns in which Ribbon Wire can be woven, make it the perfect selection for Lift Shaft Enclosures, Ventilating Panels, Radiator Covers, Electric Heater Covers, etc. Illustration shows Pattern No. 1361 W. Other Patterns and full particulars in Catalogue A 744

Harvey

G. A. Harvey & Co. (London) Ltd. Woolwich Road, London, S.E.7

Wardle

FLOODLIGHTS



Round types for regular or projector type lamps. Swivel baseplates for mounting in any position.



Dual-focus type of high efficiency for gasfilled lamps, or projector lamps in cap up or cap down positions. Swivel baseplates for mounting in any position.



Rectangular types for mercury discharge, sodium discharge, and tubular line-filament lamps.

The types illustrated typify the wide range of Wardle Floodlights, suitable for all kinds of decorative and useful indoor and outdoor illuminations in factories, rail and other yards, parking grounds sports arenas and so on. Made in the same factory as "Primalux" directional lighting units, "Workslite" industrial lighting reflectors and "Maxheat" Oval tubular electric heaters.

Full details by return from . . .

THE WARDLE ENGINEERING COMPANY LIMITED
OLD TRAFFORD, MANCHESTER, 16.

an invitation to see in action the modern method of **WHOLE-HOUSE WARMING**

• VISITORS TO THE BUILDING EXHIBITION are cordially invited to see the Radiation Whole-house Warming System in action at the experimental houses at Stanmore. Please get in touch with the Whole-house Warming Department, of Radiation Group Sales Limited, Lancelot Works, Wembley, Middlesex, Telephone: Wembley 6221, for arrangements for your visit to be made.
• A model of the system will also be on display on the C.U.J.C. Stand at the Exhibition.



Radiation Whole-house Warming by ducted air ensures a pleasant, healthy temperature from floor to ceiling in every room and every passage in the house. The system may incorporate either a fully automatic gas unit, or a solid fuel appliance which burns, without smoke, any solid fuel including bituminous coal.

Issued by Radiation Ltd., Aston, Birmingham 6, & 7-8 Stratford Place, London, W.1

PRIMARY BUILDING SUPPLIES

A comprehensive service for Scotland

BRICKS

WASHED SAND & GRAVEL

Composition brick in standard size produced in our own brick-fields and delivered to all parts of Scotland and for shipment to The Isles and Northern Ireland.

WORKS AT:

SUMMERSTON, GLASGOW, N.W. BLACKHILL, GLASGOW, N.W.
BISHOPBRIGGS, GLASGOW, N.W. HOLYTOWN, LANARKSHIRE.

Supplied either in standard grades or to special specification
QUARRIES: GLASGOW, EDINBURGH, DUMBARTONSHIRE,
DUNDEE, LONDON.

GROUND LIMESTONE, STONE, GRANITE

Quarry: Wester Bleaton,
near Blairgowrie.

Crushed and Tarred. Crushed, Sets,
Aggregates, etc.

Associate Company: SCOTTISH CEMENT SALES LTD.,
All brands of Portland and Coloured Cements.

KEIR & CAWDER LTD.

Brickmakers

Quarrymasters

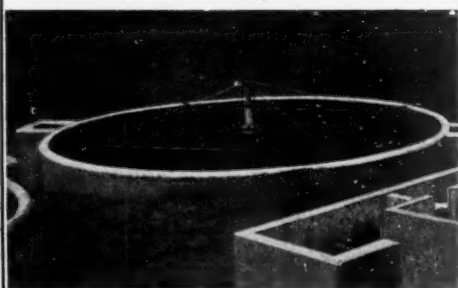
Builders' Merchants

109, HOPE STREET, GLASGOW, C.2.

Telephone: CENTRAL 0081/8

Telegrams: "GRAVEL, GLASGOW."

LONDON OFFICE: 9 UPPER GROSVENOR STREET, W.1. Phone: MAYFAIR 8766/9



SEWAGE AND TRADE WASTE DISPOSAL

Particulars on request.

Please send us your enquiries for:

SEWAGE PUMPS, EJECTORS, VALVES
DISPOSAL WORKS EQUIPMENT
PENSTOCKS AND ALL TYPES OF
SEWERAGE IRONWORK.

ADAMS-HYDRAULICS LTD

YORK AND LONDON

Phone: YORK 2047

LONDON, WHITEHALL 8235



IT'S SO EZEE . . .

...when you have modern streamlined cabinets which literally flow together, with Formica counter tops in a favourite colour, which can be supplied in one piece up to 9ft. long.

You have a choice of seven different widths of counter and wall cabinets. All cabinets are made of zinc-coated steel that resists heat, moisture and rust, ensuring great rigidity and durability.

Sink units from £54. Complete kitchens average £200 to £300.

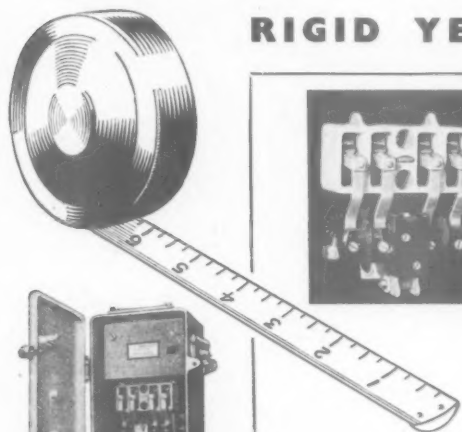
Visit our showrooms or write for latest brochure T.2 and name of nearest distributor.

EZEE KITCHENS LIMITED

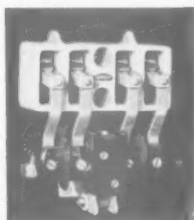
341a SAUCHIEHALL STREET, GLASGOW

Telephone: DOUGLAS 4956

London Showrooms: 8 LANSDOWNE ROW (off Berkeley St.) W.1
Telephone: GROSVENOR 5068

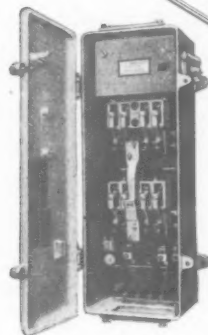


RIGID YET FLEXIBLE...



Rigid in its adherence to Brookhirst standards, Brookhirst Standard Range of units offers complete flexibility in adaption to particular and even special applications of a.c. and d.c. motor control.

By specifying from the Standard Range users secure the strictness of a particular specification, and the advantages accruing from standard production. Write for descriptive Catalogue 31 D



Above: Standard 'Pocketed' a.c. Contactor Type 793: circuit broken in deep pockets in a ceramic block. Designed with 550v clearances throughout.

Left: Type 793 reversing contactors mechanically interlocked in Standard Type SC2X51 starter.

BROOKHIRST

STANDARD RANGE

BROOKHIRST SWITCHGEAR LTD., CHESTER

BST



There is very little in the woodworking line that we can't produce at Boulton & Paul. Whatever it is we make it quickly to your specification — we make it very well. And we deliver it. May we quote you?

**when the joinery
is by ...**

BOULTON AND PAUL

IT'S A FIRST CLASS JOB

NORWICH · LONDON · BIRMINGHAM

CBC 6J

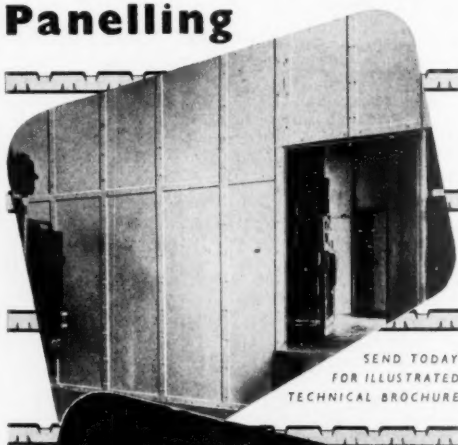
DURASTEEL

3DF2 Composite

Steel-&-Asbestos

Fire Protection

Panelling



SEND TODAY
FOR ILLUSTRATED
TECHNICAL BROCHURE



Keep Fire at Bay the DURASTEEL Way!

FREE! SPECIAL OFFER

INTERIOR & EXTERIOR
'KURO' TRIAL TIN

DAMP WALLS CURED in 24 HOURS

with
This offer does not apply to fire.

"KURO" is supplied in colours Buff, Cream, Pale Green, White, French Grey, Brick Red. State colour—Important.

"KURO" can be applied on a damp surface and will become rock hard in 24 hours. And 100% waterproof.

'KURO' DECORATIVE WATERPROOF PAINT

FREE COUPON

To Dept. 75K
CONCRETE PAINT CO., 9A HIGH STREET, BARNSTAPLE
PLEASE SEND TRIAL TIN AS OFFERED.

Send this Coupon with 1/3 P.O. for Carriage Paid Home	MARK COLOUR REQUIRED WITH X	BUFF CREAM PALE GREEN WHITE FRENCH GREY BRICK RED
NAME	ADDRESS	
BLOCK LETTERS PLEASE		TRADE
NO PAINT SUPPLIED WITHOUT COUPON		KURO

Obtainable only from address above

CONSTRUCTION IN

CONCRETE OR RAMMED EARTH

BY HYSPECON MOVING FORM
AND UNSKILLED LABOUR

NOW SUPPLIED TO
42 COUNTRIES



HYSPECON LIMITED

6, STANLEY PARK RD.

WALLINGTON
SURREY
ENGLAND

W'TON 2689

A REVOLUTIONARY IDEA FOR THE BUILDING TRADE

*Does a day's work
in an hour for*

BUILDERS
PLUMBERS
ENGINEERS
ELECTRICIANS
ETC.

STAND 491

GRAND HALL
GALLERY
NOV 14-28

SEE
THIS
AMAZING
TOOL



BUILDING TRADES EXHIBITION

Announcement of F. H. BOURNER & CO. (ENGINEERS) LTD., CARLTON RD., S. CROYDON, SURREY.



for BATHROOMS, KITCHENS
CANTEENS, Etc.

Specify
VITROLITE wall-lining by

D. W. PRICE of NEASDEN

GLADSTONE 7811-5

N.W.10

and at
PECKHAM · ENFIELD · TAUNTON



RUINS THE BEST OF PLANS...



.. be sure to specify

BRIGGS

AQUALITE

BITUMEN DAMPCOURSE

'laid in a minute ... lasts as long as the wall.'
PREVENTS DAMP AND DRY ROT

WILLIAM BRIGGS & SONS LTD., DUNDEE · LONDON: VAUXHALL GROVE, S.W.8
Branches at Aberdeen, Edinburgh, Glasgow, Leicester, Liverpool, Norwich
D.C.7

Thermacoust

CHANNEL REINFORCED
WOOD WOOL ROOFING SLABS



Newby County Primary School,
Architect: Wm. Tocher, A.R.I.B.A.

- ★ For Pitched or Flat Roofs.
- ★ NO purlins needed at less than 7 ft. centres.
- ★ NO other insulating material has greater structural strength.
- ★ NO timber rafters needed for tiled roofs.
- ★ NO ceiling needed; high sound absorption if left bare.

THERMACOUST Channel reinforced Slabs are ideal for modern roof construction. Supplied in large unit size, they can be handled with speed and low-labour cost. They have exceptional heat insulating properties and high sound absorption value. Leading Architects and Local Authorities are using them extensively for schools, factories, office buildings, etc. **Standard slabs 6 ft. long; 6 ft. 8 in. and 7 ft. slabs made to order.**

T 8

THERMACOUST LTD., 39, VICTORIA STREET, LONDON S.W.1 (Abbey 2738)



The **BUILDING EXHIBITION**
NOV. 14-28

RENTOKIL Technical Experts will be in attendance on
STAND 404, GALLERY-GRAND HALL to deal
with any problems of

WOODWORM & DRY ROT



Visit the PERMANENT EXHIBITION for
WOODWORM & DRY ROT at the
WOODWORM & DRY ROT CENTRE
23 BEDFORD SQUARE
LONDON, W.C.1
Tel.: LANGHAM 5455, 6

RENTOKIL LTD., FETCHAM, LEATHERHEAD, SURREY
Tel.: Leatherhead 4021/2

*It can't
happen
here!*



There's never an embarrassing moment with this briefcase. It's built for business trips . . . to hold papers and pyjamas—but separately! There are pockets for foolscap folders . . . and a zip-sealed compartment for personal things. An added traveller's joy is the outside zip pocket—broad enough for the *Decameron*, deep enough for *Punch*, unfolded.

This handsome case—in selected hog-grained leather, finished in a fine golden tan, and leather-lined—can be slimmer in a moment by two press studs. Lever



lock and fittings of solid brass.

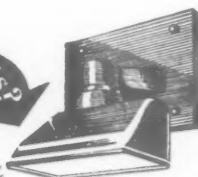
Size 17" x 11½". Price £7.10.0 post free (\$23.75 in U.S.A., including carriage and insurance). Also available in smooth polished hide at £9.9.0 (\$27.50). Money back guarantee of satisfaction.

Immediate dispatch.

Obtainable only direct from the makers.

UNICORN LEATHER COMPANY LIMITED
DEPT. AB2) WOODHILL WORKS, BURY, LANCs.

down to details?
then
it's
as well
to remember...



that an important contributory factor to the safety and dependability of any new building is the use of ASHTON cables and flexibles for all lighting and power duties.

ASHTON cables and flexibles are manufactured to B.S.S. No. 7, 1946 amendment No. 3, August, 1949. P.D. 947.

ASHTON

CABLES & FLEXIBLES

AERIALITE LTD. CASTLE WORKS, STALYBRIDGE, CHESHIRE

Your Synthetic Tile Problem Solved

DAY AND MARTIN

Introduce "DAYMAR" WATER WAX EMULSION POLISH



With the advent of Synthetic Tiles for flooring, a new problem arose—how to maintain the hard surface and original pattern.

DAY & MARTIN have solved the problem by producing "DAYMAR" a Water Wax Emulsion Polish.

Prepared specially for the purpose; non-skid; will not bleach colour from tiles and gives a pleasing shine with minimum of labour.

Sold in half gallon, one gallon, 5 gallon drums and 40 gallon barrels.

Suitable for Rubber and Composition Floors.



TRADE INQUIRIES
Invited

CARR & DAY & MARTIN. LONDON. N. II.

weather wise . . .

"DUBROSCO" METAL CASEMENT PUTTY

A quick-hardening putty, specially prepared for glazing metal casements. Absolutely waterproof, it finishes cleanly without surface skinning, shrinking, cracking or wrinkling. It is supplied ready for use and needs no preparation, and is available in two colours, Natural or Brown.

1441 BEDDING MASTIC

A special Mastic cement for bedding Metal or wooden casements into brick or wooden surrounds. Can also be used for filling the interstices of composite casement units. Completely unaffected by weather or vibration.

N. A. F. BRAND GENUINE LINSEED OIL PUTTY

For glazing of wood frames.

GLASTIC WALL LINING MASTIC

A special preparation of putty-like consistency, for fixing glass tiles. Easier to handle and has greater covering properties and is supplied ready for use.



DUSSEK BROTHERS & CO., LTD.

THAMES ROAD, CRAYFORD, KENT.

Telephone: Bexleyheath 2000 (5 lines)

MONOPHALT

(REGISTERED)

THE MASTICS FOR
ROOFING, DAMPCOURSES, FLOORING, ETC.
 COMPLYING WITH BRITISH STANDARD SPECIFICATIONS
 SUPPLIED AND LAID BY
THE FRENCH ASPHALTE CO.

WHOSE BUSINESS IS INCORPORATED WITH THAT OF
HIGHWAYS CONSTRUCTION LTD.
 IDDESLEIGH HOUSE, CAXTON STREET, LONDON, S.W.1.

PHONE: ABBEY 4366

THE COLLEGE OF ESTATE MANAGEMENT

St. Albans Grove, Kensington, W.8

Day and Evening Courses for the following Examinations:
 University of London Degree of B.Sc. (Estate Management), commence
 in October. (Day courses only.)

Applications by 31st May.

Royal Institution of Chartered Surveyors (Building, Quantities and
 Valuations sub-divisions), commence in April.

Applications by 31st December.

Postal Courses

B.Sc. (Estate Management), commence in January and July. The Royal
 Institution of Chartered Surveyors, Institution of Municipal Engineers,
 Royal Sanitary Institute, commence in April and October. Town
 Planning Institute, commence in May and October.

Application forms to reach the College two complete calendar months prior
 to commencement of course.

Applications to The Secretary. Telephone: Western 1546.

ACTUAL MANUFACTURERS OF

PLYWOOD and VENEERED PLYWOOD

SPECIALITY — PANELLING
 TO

ARCHITECTS' SPECIFICATIONS

RELIABLE PLYWOOD COMPANY LIMITED

PROGRESS WORKS, WARBURTON STREET, LONDON, E.8

Telephone: Clissold 8135.6

Telegrams: Reliably-Hack, London



SANITARY ENGINEERS AND
 FIRECLAY MANUFACTURERS

SCOTSWOOD-ON-TYNE

London Showroom: 54, VICTORIA STREET, S.W.1.

KINNEAR
 PATENT STEEL ROLLING
SHUTTERS

"Rolling" Shutters is a term indicative of class,
 not quality, but the word "KINNEAR" prefixed
 gives added significance and carries with
 it the assurance of superior service.

ARTHUR L. GIBSON & CO LTD

Turkmen Birmingham Manchester Glasgow

"A.B.S." HOUSE PURCHASE LOANS

Alternative Schemes

1. Normal Advance: 80 per cent. of Valuation.
 Interest: 4 per cent. gross. (Borrower pays Survey
 Fee and Legal Costs, totalling 1 per cent. of loan).
2. Normal Advance: 85 per cent. of Valuation.
 Interest: 4½ per cent. gross. (Office pays Survey
 Fee and own Legal Charges).
 Repayment by means of an Endowment Assurance
 term not exceeding 25 years under (1) or 30 years
 under (2).

HOUSES IN COURSE OF ERECTION

Advance increase to 90 per cent. of the controlled selling
 price.

Particulars from: The Secretary,

A.B.S. INSURANCE DEPARTMENT
 66 Portland Place, London, W.1. (Tel. LANGham 8731).

FOR YOUR ROOFING PROGRAMME

SLATES are BEST

PENRHYN
 U S E RED, BLUE & GREY
SLATES

Apply

PENRHYN QUARRIES,

B. G. F. Adlington, Agent,

PORT PENRHYN, BANGOR, N. WALES

HALL'S WIDE SPAN TIMBER BUILDINGS

For CANTEENS • STAFF RECREATION
ROOMS • WORKSHOPS for LIGHT WORK



Hall's are renowned for their timber buildings not only as manufacturers but as prime designers and pioneers. Your needs receive the personal attention of those responsible for the high Hall standard and any building purchased is backed by the reputation, skill and integrity of Halls of Paddock Wood. Buildings for Industry, Education, Sport, Municipal or Constructional needs. Site offices and Contractors' Huts also supplied. Let us quote for your requirements. Supplied free of licence. Write to

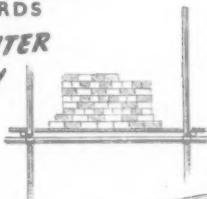
HALL'S Dp.A20 **PADDOCK WOOD
TONBRIDGE KENT**



**Steel SCAFFOLD
BOARDS**

STRONGER - LIGHTER
Last a lifetime!

Form a flat, solid and level floor, which will not break, split, skellow or rot. Save 50% transport space and are indestructible. Write for leaflet.



BOARDS: 7ft., 8ft., and 9ft. lengths from stock. Weight approx. 4lbs. per foot. SLEEVES: 1ft. long. Loose or welded to board.

Stand 434
GRAND HALL GALLERY
BUILDING
EXHIBITION



H. L. REYNOLDS, LTD.
Old Leeds Steel Works,
Balm Road, Leeds.

STEEL STOCKHOLDERS, STRUCTURAL
ENGINEERS, SHEET METAL ENGINEERS

*Twice the heat
output of any other
boiler of its size!*

*Astonishing initial circulation
10 radiator circuit heated in
under an hour!*

*The Unit and Radiator are so
neat and compact - the cleverest
design ever. They harmonise
with any scheme of decoration!*

*Fully
Automatic!*

**For any
building project**

where the

CENTRAL

HEATING

System must be

inexpensive

labour-saving,

independent of

fuel cuts,

automatic

and

available

NOW -

Plan it

with

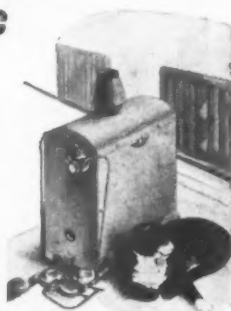
*Gas-fired - so no worry
about coal & coke shortages
or electricity cuts!*

*No stoking!
No cleaning out!!
No trouble at all!!!*

*Thermatically controlled
-start-stop clock
is available.*

*So economical - it
soon pays for itself!*

Guaranteed for 12 months



Plant Heating

THE NEW **GAS-FIRED** PATENTED
CENTRAL HEATING UNITS

SEND FOR DETAILS NOW
To: PLANT HEATING UNITS SALES, Dept. E,
58, Wellington Road North, STOCKPORT. Tel: STO. 3657/8
Please send me full particulars of Plant Heating Units

Name

Address

OFFICIAL ANNOUNCEMENTS

APPOINTMENTS • CONTRACTS • TENDERS

Rate 25¢ per inch Single Column

Close for press 1st post Monday for following Thursday Issue

APPOINTMENTS

LONDON COUNTY COUNCIL.

QUANTITY SURVEYOR'S ASSISTANTS required in housing and valuation department for development of cottage estates. Salaries up to £700 (basic) for senior appointments and up to £580 (basic) for junior positions according to qualifications and experience. Salaries at present subject to addition of 10 per cent on first £600 and 7½ per cent on remainder.

Duties include measurement of work in construction of houses, roads and sewers, preparation of interim valuations, measurement and adjustment of sub-contracts, small estimates, measurement of variations.

Application forms from Director of Housing and Valuer, County Hall, S.E.1. Stamped addressed envelope required. Quote QS/57. (1251.) [5888]

COUNTY BOROUGH OF GRIMSBY.

APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following appointments in the Architectural Section of the Borough Engineer & Surveyor's Department:—

(a) ARCHITECTURAL ASSISTANT, Grade A.P.T. VII. Salary £685-£760 per annum.

(b) ARCHITECTURAL ASSISTANT, Grade A.P.T. V. Salary £570-£620 per annum.

Married applicants should state whether the provision of housing accommodation by the Corporation would be a condition of acceptance of the appointment.

In the case of appointment (a) preference will be given to candidates with experience in the design and erection of new schools, whilst for appointment (b) experience on working drawings for various types of public buildings will be advantageous.

The appointments are terminable by one month's notice on either side and also subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidates will be required to pass a medical examination.

Applications stating age, whether married or single, qualifications, and details of training and experience, together with copies of two recent testimonials, to be delivered to the undersigned not later than Monday, the 26th November, 1951.

J. V. OLDFIELD,
Borough Engineer & Surveyor.
Municipal Offices,
Town Hall Square,
GRIMSBY.
November, 1951. [5905]

LONGBENTON URBAN DISTRICT COUNCIL.

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment in the Engineer and Surveyor's Department from persons who have passed the Intermediate examination of the R.I.B.A. or its equivalent of one of the recognised Schools of Architecture. Applicants must have had experience in design and construction, particularly in relation to housing.

Salary will be in accordance with A.P.T. III (£500-£545 per annum) or A.P.T. IV (£530-£575 per annum) of the National Scales according to the experience of the successful candidate.

The appointment is terminable by one month's notice on either side and is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant," stating age, qualifications, with full details of training and experience, and accompanied by copies of two recent testimonials, must be received by the undersigned not later than the 1st December, 1951.

Candidates must disclose in writing whether they are related to any member or senior officer of the Council, and canvassing, directly or indirectly, will disqualify.

G. HARRISON,
Clerk of the Council.
Council Offices,
FOREST HALL,
Newcastle upon Tyne.
8th November, 1951. [5937]

APPOINTMENTS—contd.

LONDON COUNTY COUNCIL.

ARCHITECT'S DEPARTMENT.

PRINCIPAL ASSISTANT (professional) (£1,047 to £1,197) to assist in organising and leading a large division engaged upon adaptation, improvement, maintenance and repair of buildings and surveying property for acquisition.

Experience of large-scale building maintenance organisations desirable. Drive and organising ability essential.

Further particulars and application form (returnable by 8th December), from Architect, County Hall, S.E.1, enclosing i.a.e., quoting AR/EK/MS. (1299.) [5930]

THE POLYTECHNIC,
309, REGENT STREET, W.1.

SCHOOL OF ARCHITECTURE, SURVEYING AND BUILDING.

REQUIRED as soon as possible, a part-time day **TEACHER** to lecture on **THEORY OF STRUCTURES**.

Candidates should be qualified to give instruction in this subject up to the final stage of the Diploma course in Architecture.

The rate of pay is 47/6 for intermediate classes and 59/- for final classes, for each three-hour period.

A form of application may be obtained from the undersigned.

J. C. JONES,
Director of Education.
[5935]

THE POLYTECHNIC,
309, REGENT STREET, W.1.

SCHOOL OF ARCHITECTURE, SURVEYING AND BUILDING.

Applications are invited for the following full-time appointments, duties to commence if possible on 1st January, 1952.

(1) **SENIOR LECTURER** IN ARCHITECTURE. Candidates should possess a degree or a diploma of a recognised School of Architecture. Responsible professional and teaching experience are necessary qualifications.

(2) **STUDIO MASTER** IN ARCHITECTURE. Candidates should possess a degree or diploma of a recognised School of Architecture and will be required to give instruction in design and construction.

(3) **TEACHER OF BUILDING SUBJECTS**. Candidates should be qualified to teach building subjects to students preparing for the examinations of the Royal Institution of Chartered Surveyors and for National Diploma and Certificates in Building.

(4) **TEACHER FOR FREEHAND AND COLOUR WORK**. Candidates should possess a degree or diploma of a recognised School of Architecture or an Art Teacher's Diploma recognised for graduate status. Experience in Industrial Design would be an added qualification.

The salary scales are as follows:—

(1) £1,000 per annum rising by annual increments of £25 to a maximum of £1,150, plus London allowance of £36 or £48 per annum.

(2) and (3) Grade B, Burnham (Further Education) Scheme. Minimum £450 per annum rising by annual increments of £25 to a maximum of £725 per annum. Additions to the scale are: Graduate-ship £60 per annum; approved study or training, £18-£54 per annum; London allowance, £36-£48 per annum.

The commencing salary may also include increments in respect of war service and previous teaching and professional experience.

(4) Grade A, Burnham (Further Education) Scale. Minimum £375 per annum rising by annual increments of £18 to a maximum of £630 per annum. Additions to the scale are as in (2) and (3).

A form of application, which should be returned by not later than 30th November, 1951, may be obtained by sending a stamped addressed envelope to the undersigned.

J. C. JONES,
Director of Education.
[5936]

APPOINTMENTS—contd.

TIMBER DEVELOPMENT ASSOCIATION, LTD.

FURTHER advertisement—Those who have already applied need not do so again as their application is being considered.

Applications are invited for the appointment of a **SENIOR STRUCTURAL ENGINEERING ASSISTANT** in the Research and Design Department of the Association. Applicants should be Corporate Members of the Institution of Civil Engineers and/or the Institution of Structural Engineers, who have had at least three years' practical design experience of framed structures.

The successful candidate will be engaged upon the advancement of timber structural design technique. Previous design experience in timber is desirable, but not essential. Commencing salary: £650 per annum.

The successful candidate will be required to join the Staff Superannuation Scheme if invited to do so.

Applications stating age, qualifications and experience should be addressed to The Director, Timber Development Association, Ltd., 21, College Hill, E.C.4, by the 5th December, 1951. [5934]

OVERSEAS TECHNICAL SERVICE.

THE following vacancies occur in Africa for experienced staff:—

NAIROBI, KENYA. (OSS.17/2) 2 or 3 Assistant Architects, salary £720 p.a. plus bonus, free passage.

PRETORIA, SOUTH AFRICA. (OSS.30/1) Quantity Surveyor, salary £750-£1,000 p.a., for professional office.

NAIROBI, KENYA. (OSS.38/1) Structural Engineers and Designers, free passage for family, c.o.l. allowance, home leave.

KITWE, NORTHERN RHODESIA. (OSS.37/1) Assistant Architect, salary £720 p.a., cheap staff accommodation, single men only.

BULAWAYO, SOUTHERN RHODESIA. (OSS.23/4) Assistant Architect, salary £750-£1,000 p.a., administrative ability an advantage.

NAIROBI, KENYA. (OSS.10/4) Assistant Architect, salary £720 p.a., contemporary design essential.

BULAWAYO, SOUTHERN RHODESIA. (OSS.23/2) Draughtsman, salary £400-£600 p.a., free passage.

Applicants should write with brief personal and professional details for fuller particulars of above posts, quoting relevant reference number.

All professional and technical staff interested in posts abroad should get "OVERSEAS APPOINTMENTS" fortnightly for details of conditions and cost of living in the Colonies and Commonwealth. Subscription 10s. half yearly, 17s. 6d. annually post free.

Apply, the Principal, Overseas Technical Service, 5, Weldon Crescent, Harrow, Middlesex. [5948]

COUNTY BOROUGH OF SOUTHAMPTON

BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

Applications are invited for the following appointment:—

ARCHITECTURAL ASSISTANT, Grade A.P.T. IV (£530-£575 per annum).

Applicants should have had experience of Local Authority Housing, and preference will be given to Associate Members of the Royal Institute of British Architects.

The appointment will be subject to the Scheme of Conditions of Service of the National Joint Council for Local Authorities for Administrative, Technical, Professional and Clerical Services; to the Local Government Superannuation Act, 1937; to the successful applicant passing a medical examination; and to termination on either side by one month's notice.

Applications, stating age, experience, qualifications and war service (if any), together with copies of three recent testimonials, should be submitted to the Borough Engineer & Surveyor, Civic Centre, Southampton, not later than Wednesday, 28th November, 1951.

R. RONALD H. MEGGESON,
Town Clerk.
Civic Centre,
Southampton. [5938]

APPOINTMENTS—contd.

LONDON COUNTY COUNCIL.

ARCHITECTURAL ASSISTANTS required for preparation of working drawings for housing schemes (cottages and multi-storey flats) in Housing Architect's division of Housing and Valuation Department. Salaries up to £580 plus 10 per cent according to qualifications and experience. Superannuable. Apply Director of Housing and Valuer, County Hall, S.E.1, quoting AA/56. Stamped addressed envelope required. (1250.) [5888]

BUCKINGHAMSHIRE EDUCATION COMMITTEE.

AYLESBURY TECHNICAL INSTITUTE.

REQUIRED in January 1952 LECTURER IN BUILDING SUBJECTS with ability to teach brickwork practice and technology to Final City and Guilds standard. Salary on Grade A of Burnham Technical Report 1951 (£375 x 6.18 = £2306, according to previous experience). Application forms from the Headmaster, The Technical School, Walton Road, Aylesbury. [5920]

LANCASHIRE COUNTY COUNCIL.

PLANNING ASSISTANT A.P.T. I-V (£440-£620) required at the Liverpool Divisional Planning Office. Salary commensurate with qualifications and experience. Candidates for Grade V should be qualified by professional examination as Architects, Surveyors, Engineers or Town Planners, and for Grades I-IV possess a University Degree or the Intermediate Certificate of an appropriate professional body.

Applications, giving the names, addresses and qualifications of two referees (preferably one should be present employer), should reach the County Planning Officer, East Chis. County Offices, Preston, by 30th November, 1951. [5910]

WILLENHALL U.D.C.

require

SENIOR ASSISTANT ARCHITECT. Salary £645-£710 (A.P.T. Grade VI). Applicants must be Associate Members of R.I.B.A. and have experience in design and construction of large housing developments, including shopping areas. Appointment subject to N.J.C. Conditions, Local Government Superannuation Act, 1937, and one calendar month's notice on either side.

HOUSE AVAILABLE FOR SUCCESSFUL APPLICANT. Applications, stating age, qualifications, present and previous appointments, whether related to any member or senior officer of the Council, and the names of two referees, to reach Mr. R. T. Chappell, A.R.I.B.A., Housing Architect, Town Hall, Willenhall, Staffs, by 3rd December, 1951. [5940]

BOROUGH OF ALDERSHOT

BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

APPLICATIONS are invited for the appointment of **QUANTITY SURVEYOR, A.P.T. Division Grade VI**, salary £645-£710 per annum.

Applicants should be members of a recognised professional Institute and must be fully experienced in, and prepared to accept responsibility for, the preparation of Bills of Quantities, measurement of work on site, the agreement of final accounts, and the preparation of cost statements.

The appointment is subject to the National Conditions of Service for Local Government Officers, the Local Government Superannuation Act, 1937, the passing of a medical examination, and three months' notice on either side.

HOUSING ACCOMMODATION WILL BE MADE AVAILABLE TO THE SUCCESSFUL CANDIDATE.

Applications, stating age, qualification, present and previous appointments, details of experience and accompanied by copies of two recent testimonials, should be sent, suitably endorsed, to the Borough Engineer and Surveyor, Municipal Buildings, Grosvenor Road, Aldershot, to reach him not later than noon on Friday, 14th December, 1951.

Canvassing will disqualify and applicants must disclose whether they are related to any member or senior officer of the Council.

D. LLEWELLYN GRIFFITHS.

Municipal Buildings,
Aldershot.
9.11.1951.

Town Clerk. [5949]

CONTRACTS

WELTON RURAL DISTRICT COUNCIL.

HOUSING TENDERS.

THE above Council invites Contractors who are desirous of submitting a tender for the erection of 2 HOUSES at SNELLAND to send their names to the Architects, Messrs. Wm. Saunders & Partners of 24, Castle Gate, Newark on Trent (or 14, Mercer Row, Louth, Lincs.) from whom copies of the Specification and Bills of Quantities and Conditions may be obtained on payment of £3/3/-, which will be returned on the receipt of a bona fide tender.

The Council will not be bound to accept the lowest or any tender received. Any acceptance is subject to the approval of the Ministry of Local Government and Planning.

This odd pair of houses will suit a small Contractor.

Sealed and endorsed tenders on the form supplied, must reach the undersigned not later than noon on Monday, the 3rd December, 1951.

F. FOSTER.

Clerk to the Council.

Council Offices,

31, Clerksgate,

LINCOLN.

9th November, 1951.

[5932]

BOROUGH OF MACCLESFIELD.

SCHEME 3A. ERECTION OF FOUR SHOPS, FOUR MAISONNETTES AND FIVE GARAGES AT WESTON, MACCLESFIELD.

TENDERS are invited for the erection of FOUR SHOPS, FOUR MAISONNETTES AND FIVE GARAGES at WESTON. The shops and maisonnettes are to be built in one three-storey structure with the garages adjacent.

Bills of Quantities and Form of Tender may be obtained from the Office of the Borough Engineer, 3, Jordanvale, Macclesfield, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona fide tender, or the return of all documents, unmarked, within seven days of their receipt by the depositor.

Tenders in plain sealed envelopes (which will be provided) are to be delivered to the Office of the undersigned not later than 10 a.m. on Wednesday, 28th November, 1951. The Corporation does not undertake to accept the lowest or any tender.

WALTER ISAAC.

Town Clerk.

Town Hall, Macclesfield.

9th November, 1951.

[5945]

MISCELLANEOUS SECTION

RATE: 1/6d. per line, minimum 3/-, average line 6 words. Each paragraph charged separately. Semi-displayed 25/- per inch. **BOX NOS.** add 2 words plus 1/- for registration and forwarding replies.

PRESS DAY Monday. Remittances payable to Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.

No responsibility accepted for errors.

ARCHITECTURAL APPOINTMENTS VACANT

EXPERIENCED Architectural Assistant required, age about 30 years, salary and terms on application.—Reply Box 5098. [5919]

SCHERRER & HICKS, 19, Cavendish Sq., W.1, require an architectural assistant of Intermediate standard; salary by arrangement.—Tel. Langham 6217. [5899]

ASSISTANTS required in Architect's Department of large East Midland industrial concern for varied and interesting work in connection with extensive works development programme. Applicants should have initiative in designing and be capable of preparing full working drawings from architect's sketch plans.—Junior and Senior assistants are required and applicants should reply, giving details of age, experience and salary required, to Box 4893. [5884]

IMPERIAL CHEMICAL INDUSTRIES, Ltd. A General Chemists Division, require one or two assistant architects in the Architectural Section of their Chief Engineer's Department, Runcorn. Applicants should have had good experience in design and the preparation of working drawings. Other factors being equal, preference will be given to those who have passed the final examination of the R.I.B.A. Salary dependent on age and experience. Membership of Pension Fund.—Apply in writing, quoting E/81, to Staff Manager, Imperial Chemical Industries, Ltd., General Chemicals Division, Cunard Building, Liverpool, 5. [5893]

SITUATIONS VACANT

STRUCTURAL draughtsman required for Leamington Spa area, experience in design of industrial buildings and alterations necessary. Knowledge of building work would be an advantage. Copies of testimonials and salary required to Box 3013. [0111]

MEASURER required for Estimating Department in firm of Reinforced Concrete Engineers in London Office. Also vacancy for Junior Measurer.—Write stating age, qualifications and salary required to Box A.N.565, at 191, Gresham House, E.C.2. [5929]

WANTED Architectural Draughtsman as Assistant to Architect in the Design Unit of a Manchester Advertising Agency. Must have practical building knowledge and be capable of carrying jobs through to completion. The work includes office and showroom reconstruction and the design of contemporary exhibition stands.—Write, giving fullest details and salary, to Box 5192. [5946]

ENGINEER/AGENT required for large B. & C.E. Contract in Southern England. Applicants of the highest ability only need apply and must produce references from well known firms for which they have worked. Salary, etc., to be discussed at interview.—Write Box 810, c/o Geo. Murray (Adv.), Ltd., 184, Strand, London, W.C.2. [5911]

SITUATIONS WANTED

DESIGNER Draughtsman, Arch. Metalwork, 22, studying N.D.D., requires position to gain experience, prefer Birmingham area.—Box 5193. [5947]

SERVICES OFFERED

THATCHING and reedcladding contracts undertaken by experts.—J. G. Cowell, Soham, Ely, Cambs. [0112]

SPECIFICATIONS, technical matter carefully typed and checked. Standard rates.—Cooper, 22, Tabor Gardens, Chesham, Vic. 6560. [5912]

BOOK-KEEPER/Accountant offers services for a moderate fee to London businesses which do not employ full-time office staff.—Box 5190. [5939]

ARCHITECTURAL Models, coloured perspectives, layouts, interiors and sketch plans. Quotations by return.—Turner, 3, George Street, Croydon 2930. [5909]

AGENCIES WANTED

AN ESTABLISHED EXPORT HOUSE dealing exclusively in building materials, as manufacturers' agents, is interested in extending range of products and seeks link-up with manufacturers. Replies to Box 4881. [5876]

CONTRACTS WANTED

PLUMBING & Heating Contracts required. Lead Burning & Pipe Welding Specialists.—W. & S., 31, Sherbrooke Rd., London, S.W.6. Fulham 3993 after 4.15 p.m. [5944]

JOINTLESS COMPOSITION FLOORING in attractive colour range.—Quotations free. Full particulars from the LIOTEX ASBESTOS FLOORING CO., LTD., 10-29, Jarrold Road, London, S.E.16. Bermondsey 4341-2-3. [5931]

G. H. THOMPSON & CO., Building Contractors, 30, Thorndean Street, London, S.W.18. Phone: Wm. 0670. **CONTRACTS WANTED.** [5941]

FOR SALE

SLEEPERS in all GRADES—Chaired, Re-layable, and Roadway. **SHUTTERING, POSTS and BOARDS** for temporary enclosures always in stock. **TILLEY'S (WOLVERTON), LTD.**, Wolverton, Bucks. [5915]

R.S.J. Angle and T-Iron available for immediate delivery.—Jasco, Ltd., 246, Bethnal Green Rd., E.2. Dialing 9400. [5924]

ALL Mouldings, Plan and Embossed, and Embossed ornaments. Numerous designs.—Dareve's Moulding Mills, Ltd., 60, Pownall Rd., Dalston, E.8. [6086]

QUADRANT draughtable. Antiquarian size, with parallel ruling attachment. Mounted on wheels. As new. Bargain.—Wakeman, 38, New Hall Lane, Bolton. [5933]

PLYWOOD—4mm. nom. Resin-bonded Oak-faced Plywood, 72 in. x 36 in./42 in./48 in., cut to size. Immediate delivery ex stock.—Send for details to N. GERVER, 10, Mare Street, London, E.8. Phone: AMEL 5806. [5922]

FLUSH DOORS. Free of Licence, 6 ft. 6 in. x 7 ft. 6 in. x 1 1/2 in. (Greenwood brand). Also 100,000 ft. of super pin FINNISH LION HARDWOOD, in all sizes, at controlled prices.—Write now for free list to N. GERVER, 10, Mare Street, Hackney, London, E.8. Telephone: Amhurst 5805. [5925]

PLANT FOR SALE

BELLMAN'S for STEEL ERECTION: SUPPLY of HANGARS, LARGE SHEDS, etc.; HIRE of LATTICE STEEL ERECTION MASTS (50ft. to 180ft.).—Write Terminal House, S.W.1. Phone: Sloane 5259. [5921]

LARGE Quantities of STEEL MESH, a substitute for concrete floor reinforcing.—Inspection invited at CHURCH and BRAMHALL, LTD., The Green, Darlington. [5917]

PLANT FOR HIRE

MODERN PLANT FOR HIRE WITH SERVICE:
4 cu. yd. Priestman Wolf EXCAVATOR, with Trencher and Skimmer.
T.D.9 TRACTORS, with Angledozer and or 4 cu. yd. Scrapers.
ROLLERS—21 to 10 Tons.
Chasidie SHOVELS, Diesel.
COMPRESSORS 2-Tool Mobile.
Muir-Hill 10B, H-Way DUMPERS.
CONCRETE MIXERS, ROAD FORMS, SCAP-FOLDING.
HUBERT C. LEACH, LTD., 261, High Street, Waltham Cross, Herts. Waltham Cross 3256-7-8. [5916]

WANTED

WANTED: Concrete Machinery and Aggregate handling plant including:—
Central Mining Plant.
Large and small weighbatches.
Storage Hoppers.
Cement Silos.
Conveyors, elevators, etc.
Offers of complete plant or components with details, price, location to Box 5105. [5928]

BIRMINGHAM architect student wishes to stay with an architect's family.—Write Omkar, 41, Stirling Rd., Birmingham, 16. [5942]

LARGE quantity steel sheet piling urgently required, preferably IGB, No. 2 or No. 3 section.—Dudley Vale, Ltd., 3, Buckingham Place, London, S.W.1. Victoria 0252. [5918]

THE following R.S.J.'s are urgently required by actual user, and top price will be paid: 18in. x 6in.—4/2Ht, 6in.—Offers to: Jenco, Ltd., 246, Bethnal Green Road, London, E.2. Phone Bishopsgate 9434. [5922]

WANTED URGENTLY. One TRACK HOOK-UP LINK, with Pins, for a B.D.H. Cetrac Tractor, Blaw Knox Pat. No. 51104.
MAN-ABELL QUARRIES, LTD., Manchester, Atherton. [5943]

NISSEN HUTS, ETC.

NISSEN BUILDINGS, 36ft. x 16ft., 36ft. x 24ft. and 60ft. x 30ft.
SECTIONAL HUTMENTS, 8ft. x 6ft. and other sizes to specification.
CONTRACTORS' TOOL BOXES, SIGNS, ETC.
WILKINSON INDUSTRIAL SUPPLIES, LTD., Imperial Buildings, Cross Addy Street, Sheffield, 6. [5914]

RECONDITIONED ex-Army huts and manufactured buildings; timber, asbestos, Nissen-type, hall-type, etc.; all sizes and prices.—Write, call or telephone. Universal Supplies (Belvedere), Ltd., Dept. 32, Crabtree Manorway, Belvedere, Kent. Tel. Erith 2948. [0110]

STEEL-FRAMED TUBULAR BUILDINGS for immediate DISPOSAL, comprising Stanchions, Trusses, Furlins, Rails, etc. Complete with coverings if required. All sizes up to 60ft. single span.—R. SMITH (HORLEY), LTD., 23, Albert Road, Horley, Surrey. Horley 1116/7. [5924]

DEMOLITIONS

Demolition and Clearance.
"WATCH IT COME DOWN"
BY SYD BISHOP & SONS,
282, Baring-road, Lee, S.E.12.
Phone: Lee Green 7755.
Old Property removed with Speed. [5927]

REPAIRERS

TYRE REPAIRS. Dumper, Giant and Passenger Tyres efficiently repaired in modern cavity moulds to existing tread design. All repairs guaranteed. Prompt service. Free collection and delivery London area; country orders carriage paid one way.
SEND FOR PRICE LISTS.
Complete range of new Dumper and other Tyres in stock.
BELLAMY'S TYRE DEPOT, LTD., 22/27, Stafford Road, Waddon, Croydon. Phone Cro. 5344. [5913]

MISCELLANEOUS

GARDENS and sports grounds constructed and renovated, turfing, seeding, cultivations, land drainage, etc.—D. Sullivan & Co., 90, Devonshire Rd., London, S.E.23. Tel. For. 2187. [5848]

QUICKTHORNS: Special offer, 2-year extra quality fibrous rooted nursery-grown plants, 12-18in 18/-, 160/-; 3-year, 18-30in 24/-, 225/-; 30-40in 35/-, 330/-. Prices are at per 100 and per 1,000 respectively; carriage paid; C.W.O.—Garden Beauty Products, Newhouse Nurseries, Wickford, Essex. (Wickford 52). [0116]

CHAIRS
OF SUPERIOR QUALITY

CHPEA Chairs for Cantens, British Restaurants, Halls, etc. Personal attention given to all Orders.

Mealing Bros. Ltd.

Avenue Chair Works,
West End Road,
High Wycombe.

Telephone: Wycombe 499.



Catalogue on application

LIFTS

by **MORRIS**

Herbert Morris Ltd

Loughborough

Engineering branches in London, Glasgow, Manchester, Birmingham, Leeds, Sheffield, Newcastle, Cardiff, Bristol, Dundee, Liverpool, Nottingham, Bury St. Edmunds, Belfast

PLANNING: The Architect's Handbook, 6th Edition. "E & O.F."

Gives essentials of plan types and the outlines of more important details which affect the design and planning of most types of current buildings. 112in. x 8 1/2in. 487 pp. 607 diagrams. 21s. net. By post 22s.

Obtainable at all booksellers or by post from: Hiffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.

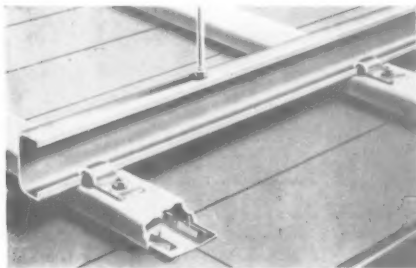
INDEX TO ADVERTISERS

Official Notices, Tenders, Auction, Legal and Miscellaneous Appointments on pages 72 and 73

Adamite Co., The	47	Colhurst, Symons & Co., Ltd.	58	Highways Construction, Ltd.	70	Pilkington Bros., Ltd.	4
Adams Hydraulics, Ltd.	64	Concrete Paint Co.	66	Hills, F. & Sons, Ltd.	42	Pilkington's Tiles, Ltd.	55
Adams, Ltd.	70	Cullum, H. W., & Co., Ltd.	66	Hysepcon, Ltd.	66	Plant Heating Units Sales	71
Aerco, Ltd.	60	<i>Inside Back Cover</i>				Price, D. W.	67
Aerialite, Ltd.	68	Demolition & Construction Co.,	28	Industrial Engineering, Ltd.	43	Radiation, Ltd.	15, 63
Albright & Wilson, Ltd.	20	Dennison Kett & Co., Ltd.	51	Kay & Co. (Engineers), Ltd.	26	Reliable Plywood Co., Ltd.	70
Anderson, D. & Son, Ltd.	48	Docker Brothers	3	Keir & Cawder, Ltd.	64	Renkohl, Ltd.	68
Asot Gas Water Heaters, Ltd.	40	Dohm, Ltd.	66	Kent, John (London), Ltd.	57	Reynolds, H. L., Ltd.	71
Avon India Rubber Co., Ltd.	49	Durasteel, Ltd.	66	King, J. A., & Co., Ltd.	56	Ruberoid Co., Ltd., The	46
Bath & Portland Stone Firms,		Dussek Brothers & Co., Ltd.	69	Kinnear Shutters	70		
Ltd.	33			Kirk & Kirk, Ltd.	30	Sanders, Wm., & Co. (Wednes-	
Benham & Sons, Ltd.	53	Ellis School, The	52, 53			bury), Ltd.	14
Betterways, Ltd.	53	Engert & Rolfe, Ltd.	51, 52, 53	Lead Industries Development		Shutter Contractors, Ltd.	34
Blackwells & National Roofings,		Enavian, Ltd.	61	Council	41	Standard Patent Glazing Co.,	
Ltd.	36	Expanded Metal Co., Ltd.	18	Le Bas Tube Co., Ltd.	5	Ltd.	59
Bolton Gate Co., Ltd.	1	Ezee Kitchens, Ltd.	64	Lister, R. A., & Co., Ltd.	35	Stainless Steel Sink Co., Ltd.,	
Boulton & Paul, Ltd.	65			Lloyd Dole & Co., Ltd.	55	The	27
Bourner F.H. & Co. (Engineers),		Ferodo, Ltd.	32	Lockwood, R. Wm.	53	Stannah Lifts, Ltd.	51
Ltd.	67	Finlock Gutters, Ltd.	48	London Sand Blast Decorative			
Boyden & Co., Ltd.	51	Flexo Plywood Industries, Ltd.	53	Glass Works, Ltd.	62	Tees Side Bridge & Engineering	
Braby, Fredk., & Co., Ltd.	38	Floor Renovations, Ltd.	53	London Brick Co., Ltd.	7	Works, Ltd.	39
Brady, G., & Co., Ltd.	31	Freeman, Joseph, Sons & Co.,				Tentest Fibre Board Co., Ltd.	17
Briggs, Wm., & Sons, Ltd.	67	Ltd.	10	McCarthy, M., & Sons, Ltd.	51	Thermacrust, Ltd.	68
Bright's Asphalt Contractors,		Gas Council, Ltd., The	29	Margolis, M.	52	Timber Development Associa-	
Ltd.	51	Gibson, Arthur L., & Co., Ltd.	70	Mary Tile Co., The	36	"The Times" Vencer Co., Ltd.	
British Constructional Steelwork		Gimson & Co. (Leicester),		Marrat & Scott, Ltd.	36	Thompson, John, Beacon Win-	
Association	44	Ltd.	52	Mealing Bros., Ltd.	74	dows, Ltd.	12
British Electricity	54	Grangemouth Iron Co., Ltd.	22	Midland Joinery Works, Ltd.	32	True Fluor	56
British Hermesal, Ltd.	54	Gray, J. W., & Son, Ltd.	52	Modern Tile Floor Co., Ltd.	53		
British Plaster Board, Ltd.	2			Morris Herbert, Ltd.	74	Uniform Leather Co., Ltd.	68
Brookthirst Switchgear, Ltd.	65	Hall Harding, Ltd.	50	Mullen & Lumsden, Ltd.	51	United Paint Co., Ltd.	34
		Hall, J. & E. Ltd.	23				
Candy & Co., Ltd.	60	Hall (Tonbridge), Kent	71	Newman, William, & Sons,		Walker Bros., Ltd.	59
Capital Selection Corporation,		Harvey, G. A., & Co. (Lon-		Ltd.		Ward, Thomas W., Ltd.	51
Ltd., The	24, 25	don), Ltd.	62	<i>Inside Front Cover</i>		Wardle Engineering Co., Ltd.	
Carr & Day & Martin	58	Hendley's, W. T. Telegraph		Orlit Construction	13	Warry Patent Building Equip-	
Carron Company	58	Co., Ltd.		<i>Outside Back Cover</i>		ment Co., Ltd.	53
Carter & Co., Ltd.	21			Palmer's Travelling Cradle &		Williams & Williams, Ltd.	8, 9
Cellon, Ltd.	6			Scaffolding Co., Ltd.	11	Winterburn, F. A., Ltd.	51
Chridges (Putney), Ltd.	53			Penryn Quarries	70	Wright, John, & Sons (Veneers),	
College of Estate Management				Pickering's, Ltd.	53	Ltd.	16



"Don't you know it's twenty to six?"



The day goes quicker and employees finish work fresher in an office with an Acousti-Celotex Ceiling. Noise of typewriters, accounting machines and telephones is reduced to a minimum and there is no need for raised voices. Offices, Travel Bureaux and Banking Halls represent some of the many applications of sound absorbing materials which are being installed by the Cullum Staff.

Canteens, Factories and Schools with sound absorbent treatment on ceilings or walls also give quieter conditions.

Illustrated alongside is the Cullum Channel Fixing System showing the method of forming suspended ceilings of Acousti-Celotex Tiles. A coloured brochure with full details will be sent on request or a practical expert will be pleased to call.

From analysis to installation we provide a complete acoustic service.

HORACE W. CULLUM & CO. LTD.

ACOUSTIC AND SOUNDPROOFING CONSULTANTS AND CONTRACTORS

F L O W E R S M E W S
L O N D O N N 1 9

Telephone : ARCHway 2662/3/4





The building of University College London was begun in 1828 to the design of William Wilkins, R.A. architect also of the National Gallery and St. George's Hospital.

The Central Main Building suffered considerable damage during air raids in 1940 and Professor A. E. Richardson, R.A. is responsible for its reconstruction, the Consulting Engineers being Messrs. Barlow Leslie & Partners.

HENLEY CABLES are being used exclusively for the re-wiring by

**RASHLEIGH PHIPPS
& CO. LTD.**

Thackeray Street, Kensington Square, W.8

**HENLEY
CABLES**



W. T. HENLEY'S TELEGRAPH WORKS CO. LTD., 51-53 HATTON GARDEN, LONDON, E.C.1.